CORPORATE GOVERNANCE IN RUSSIAN INDUSTRY*

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The Russian boom of 1999-2002, based on utilization of spare capacities and human resources, is running out of steam. Further economic growth requires new physical and human capital. Investment in new capital can be financed both from companies' own funds and outside sources. Internal finance is only available to companies in natural resource industries, hence diversification of the economy and development of other sectors requires outside investment. Outside investment is, in turn, impossible without improving the quality of corporate governance.

The Code of Corporate Conduct (hereinafter referred to as the Code) proposed by the Federal Commission for Securities Markets, seeks to address the problem of improving corporate governance and protecting outside investors. The Code prescribes standards of corporate governance allowing protection of investor interests at the level of capital markets in OECD countries. Adoption of the Code or its specific rules and standards is supposed to be voluntary. Russian experience has shown that in the absence of a mature judiciary system, voluntary adoption of new institutions may be the only available solution. Indeed, if corporate legislation is not enforced, it does not matter how perfect it is. At the same time, self-regulation along with reputation-based mechanisms can, in full or in part, compensate for a low level of enforcement.

The success of the Code will thus depend on incentives for companies to adopt its rules and standards. The main goal of this paper is to study what determines these incentives.

The study

Using a survey of a representative sample of about 1,000 Russian industrial enterprises and official data on their financial accounts, we try to establish relationships between the ownership structure, the level of corporate governance, demand for modern standards of corporate governance, and investment, controlling for the size, financial position, sectoral and regional characteristics of companies. The corporate governance is proxied by six objective measures of transparency and protection of outside investors as reported by the management.

Main findings

1. The ownership of Russian industrial firms is highly concentrated.

   Management controls on average 19% of shares. In firms where the management's stakes are not trivial, they are 27% on average. The single largest outside owner controls on average 24% (40% across firms where large outside blockholders are present). At the same time, the share of small shareholders (defined as those who hold less 5% stock) is still high – on average they control 24% of shares. Since the majority of firms in our sample are non-traded firms, the importance of small shareholders should be a legacy of mass privatization.

2. Level of corporate governance varies significantly among firms.

   On average, firms answered positively to 2.6 out of six questions on various indicators of corporate governance. Just 16% of firms gave negative answers to all six questions, 7% of firms gave positive answers to 5 or 6 questions. Level of corporate governance is higher in large firms, somewhat lower in forestry, food industry and construction materials industry, and in firms having high cash flows.

3. Ownership concentration has a positive effect on corporate governance.

   The higher is concentration of ownership in hands of administration or outside blockholder, the higher is the level of corporate governance. However, the effect of concentration is positive only as long as the largest blockholder's stake does not exceed 50%. Further concentration of ownership does not improve or even worsens corporate governance.

4. Most firms finance investments out of internal funds.

   Out of 78% firms, which invested last year, only 21% used bank credits, and just 0.7% issued equity to finance investment.

5. Ownership concentration has a positive effect on investment.

   Concentration of ownership has a positive significant effect on investment. The data does not support the hypothesis that concentration influences investment through improved corporate governance. The effect of concentration on investment remains positive and significant even when we control for corporate governance.

6. Corporate governance has no effect on investment.

   The level of corporate governance does not affect investments. However, the effect is positive if the share of minority shareholders is sufficiently high, and it is negative if ownership is sufficiently concentrated.

7. Awareness of the Code of Corporate Conduct is very low.

   Only a third of respondents answered that they were familiar with the Code and only 4% said that they knew its contents in detail.

8. Readiness to adopt the Code is determined by awareness about its contents, and by the current level of corporate governance in the firm and in other firms of the industry.

   Managers consider most of the Code's clauses being acceptable rather than unacceptable. The managers have relatively more problems with norms concerning independent directors and information disclosure. Acceptance of the Code is higher, the higher is awareness about the Code and current level of corporate governance in the firm and, even to a greater extent, the higher is the level of corporate governance in other firms of the industry.

Conclusions

In the absence of formal mechanisms of corporate governance, concentration of ownership plays the key role in the investor rights protection. Our paper shows that concentration of shares in the hands of management or a major outside shareholder (up to certain level) has a positive impact on corporate governance.

On the other hand, once management or a major outside shareholder consolidate too large a block of shares, further increase of their stake may even *lower* the level of corporate governance. This means that applicability of voluntary mechanisms of corporate governance is (at least so far) limited: voluntary mechanisms protect the rights of small outside shareholders only when managers or a large shareholder do not have a (qualified) majority of votes. Hence, mechanisms are needed, which would make it possible to reduce transaction costs of "closing" public companies (converting public companies into closely held ones), i.e. buying out minority shareholders if a large shareholder controls, for example, a qualified majority of shares.

The Code of Corporate Conduct plays an important educational role. Still, it is largely unknown to Russian companies. The efforts to promote the Code and disseminate information about the best practice in corporate governance should be continued.

1 Introduction

1.1 Motivation

The Russian boom of 1999-2002, based on utilization of spare capacities and human resources, is running out of steam. Further economic growth requires new physical and human capital. Investment can be financed both from companies' own funds and outside sources. Internal finance is only available to companies in natural resource industries, hence diversification of the economy and development of other sectors requires outside investment. Outside investment is, in turn, impossible without improving the quality of corporate governance.

Introduction of the Code of Corporate Conduct (hereinafter referred to as the Code) proposed by the Federal Commission for Securities Markets seeks to address the problem of improving corporate governance and protecting outside investors. We provide a brief description of the Code in Appendix. The Code prescribes standards of corporate governance allowing protection of investor interests on the level generally consistent with standards of Western capital markets.[5] Adoption of the Code or its specific standards is supposed to be voluntary. Russian experience has shown that in the absence of a developed judiciary system, voluntary introduction of new institutions may be the only available solution. Indeed, if corporate legislation is not enforced, it does not matter how perfect it is. At the same time, self-regulation along with reputation mechanisms can, in full or in part, compensate for a low level of enforcement.[6]

The success of the Code will thus depend on incentives for companies to adopt its rules and standards. The main goal of this paper is to study what determines these incentives.

Demand for standards of corporate governance depends primarily on what powers company managers have, what objectives they pursue, and to what extent these objectives conflict with the interests of large and small outside investors. In the course of privatization, managers of many companies received large stakes and are now often holding controlling interests either themselves or through affiliates. Managers, who do not hold stakes in a company, also exercise significant actual control over its operations. Introduction of the corporate governance standards, such as full disclosure of information, compliance with the procedures of general shareholders meetings, appointment of independent directors, and external audit, will limit the management's powers substantially. One of the principal goals of our study is to find out whether managers are prepared to partly cede control (and, as a consequence, to lose private benefits of control) in return for investment.

In addition, introduction of the Code involves considerable technical costs. Companies for which these costs are significant will be less interested or willing to adopt the Code.

The relevance of this study goes beyond understanding corporate governance in Russia. Our study is intended to contribute to the research agenda of the new institutional economics: what drives the demand for new institutions? In what situations are economic agents prepared to adopt commitment devices which will provide benefits in the future? Efficient economic institutions do not always emerge spontaneously. What hampers emergence of efficient institutions? In what situations does adoption of the Code involve greater or lesser problems? Why is the introduction of

[5] Following the authors of the Code, we define corporate governance as mechanisms securing protection of outside investors. This is how corporate governance is defined in Shleifer and Vishny (1997). In recent years corporate governance has been interpreted more broadly – not only as a mechanism of securing investors' return but also as provision of incentives within a company to invest in specific assets, including specific human capital (Zingales 1997, Bergloef and von Thadden, 1999). In other words, corporate governance is understood as a mechanism of transforming market signals into corporate behavior. This definition describes not only incentives for investors but also those for other stakeholders of a company – employees, creditors, suppliers and customers.

[6] The Federal Commission *recommended* traders and stock exchanges to require issuers to provide information on compliance with the Code standards as a condition of including securities in the quotation lists.

corporate governance institutions an equilibrium strategy in some countries and is not in others? This study intends to identify empirical regularities, which will pose further questions for theoretical and empirical research. The moment is unique: Russian corporate sector is presently undergoing a rapid institutional change; some firms have already improved their corporate governance, and others are going to follow very soon.

1.2 Literature review

New institutional economics defines institutions as "the rules of the game in a society or, more formally, … the humanly devised constraints that shape human interaction" (North, 1990). Institutions are to promote efficient exchange of goods and services among economic agents. The main tenet of the new institutional economics concerning exceptional importance of institutions for attracting investment and economic growth is recognized increasingly widely among economists and is supported by theoretical and empirical research. For example, World Bank (1998) showed that countries with high quality of institutions but inefficient macroeconomic policies grew twice as fast as those with the opposite combination.

The new institutional theory distinguishes between formal institutions built into constitutions, laws, the state structure, and informal institutions, such as standards of behavior, customs and traditions. Both are an integral part of the institutional environment. The question is whether they complement or substitute for one another and what their relative roles should be. This issue is discussed in Keefer and Shirley (2000) who show that in some cases informal institutions can indeed substitute for formal rules. However, one of the drawbacks of informal institutions is that only a limited number of players have access to them. In addition, informal institutions do not allow protection from crime and from arbitrary action by the government. Using China and Ghana as examples, Keefer and Shirley show that China has owed its success in attracting large foreign investment to the right combination of formal and informal institutions.

Awareness of relative importance of formal and informal institutions helps making right choices in implementing institutional reforms. The development of the Corporate Conduct Code is undoubtedly an attempt to consolidate informal rules and standards of corporate governance in order to compensate, at least partly, for the lack of developed formal institutions, such as corporate legislation and the judicial system.

Institutional changes are usually driven by shifts in relative prices (due to changes in relative prices of production factors, information costs, new technologies, or a change in tastes and preferences). The relative prices cause changes in incentives of economic agents. This, in turn, brings about the institutional change but only if expected benefits of transformation of institutions exceed the costs involved. However, costs (at least as seen by individual agents), are, as a rule, rather high, since a certain degree of stability and immunity to change is inherent in the nature of institutions. Hence institutional change occurs only when deviation of relative prices from the level at which existing institutions emerged, is fairly large.

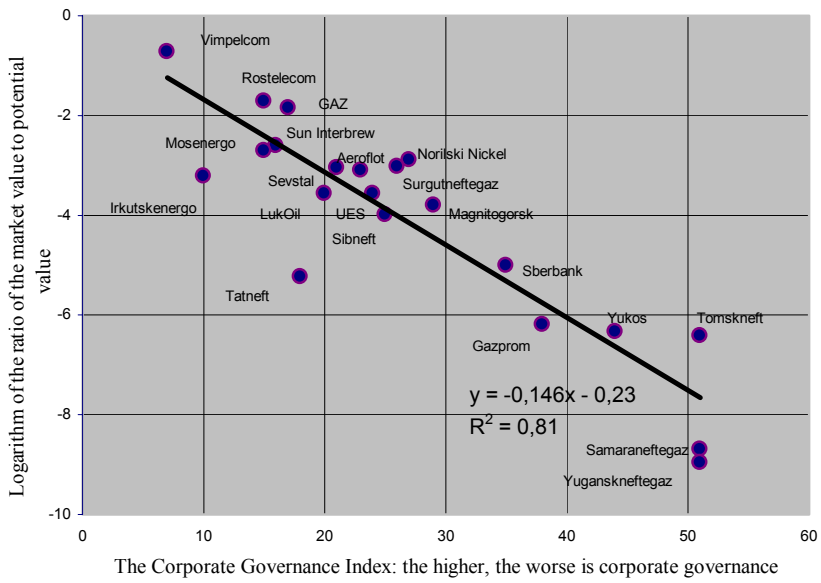
In terms of corporate governance, these issues may be reformulated as follows. Corporations often lack internal funds to finance new investment projects yielding positive discounted return. Funds could be borrowed in the credit market or raised in the stock market through issues of new equity. In either case the cost of capital will be lower if investors can be convinced that they will get high return. It is not so easy to do – managers and large shareholders have at their disposal an array of tools for expropriation of outside investors, such as asset stripping, transfer pricing, etc. (Johnson et al., 2000). Corporate governance mechanisms are essentially the institutions that curtail expropriation (Shleifer and Vishny, 1997).[7] Recent cross-country studies of ownership structure and

[7] It is hard to apply traditional notion of demand and supply to institutions since there is no market for institutions. Nevertheless, in this study we are talking about the demand for institutions of corporate governance in a sense that enterprises have incentives to establish certain norms of corporate governance to attract investments and they are free to

corporate governance institutions have shown that in countries with weak legislative protection of small shareholder rights, ownership of companies is more concentrated (La Porta et al, 1999). If the legal environment cannot guarantee protection of small shareholders, companies cannot raise capital at a reasonable cost.

How vital are these issues for Russia? In other words, how large is the misbalance between the Russian economy's need for investment and the weak system of corporate governance? Do benefits provided by introduction of modern standards of corporate governance exceed costs for specific companies rather than for the economy as a whole? There are several studies showing that there is a correlation between corporate governance and investment attractiveness of companies in transition economies. Black (2001) attempted to estimate a relationship between the level of corporate governance and the undervaluation of Russian companies. Using the corporate governance ratings developed by Brunswick Warburg in the fall of 1999 and a ratio of actual market capitalization to potential capitalization measured by another investment bank (Troika-Dialog) for a sample of 21 companies, Black found a significant correlation (See Figure 1.2.1).

Figure 1.2.1. Improvement of corporate governance increases the market value of Russian companies



The relationship between the market capitalization of the company and quality of corporate governance for 21 Russian blue chip companies in 1999. Source: Black (2001)

Simple estimation shows that improvement of corporate governance from the level of Mosenergo to that of Vympelkom can triple or quadruple market capitalization. However, cross-section analysis is certainly insufficient. A more convincing analysis undoubtedly requires use of panel data. If it could really be shown that improvement of corporate governance in specific companies increases their capitalization with time, then the results would no longer depend on the choice of a model for calculation of "potential" capitalization. The analysis of panel data is carried out in Rachinsky (2003) who shows that the effect is indeed at least 7 times as weak. However, the effect of corporate governance on market valuation is positive, significant and still quite large: a one-point improvement

establish these norms. This approach is justified since institutions of corporate governance in Russia are mostly voluntary.

in the corporate governance index (either Brunswick or ICLG) raises market value by about 2 per cent.

A convincing example of the relationship is the story of YUKOS oil company. It was one of the worst perpetrators of the investor rights in 1999, but has become the most transparent company in 2001 and 2002 when it led the growth in ICLG Corporate Governance Ratings. During the 15 months of the ICLG ratings (January 2001 to April 2002), Yukos capitalization has grown 5 times, while the RTS stock index only doubled.

Corporate governance in listed companies was the focus of a survey conducted by the Association of Russian Managers and the Russian Institute of Directors (2001). The results of the survey suggest that top managers of a hundred Russian companies are prepared to adopt most of the standards provided by the Code, even if they are not sure that it will help to attract investment.

However, very little attention is paid to companies with illiquid or unlisted shares. In 2001, there were about 60 thousand public companies and more than 370 thousand closely held corporations in Russia. Our paper takes a closer look at the question: to what extent these companies are interested in adoption of the Code.

Underdevelopment of the equity market is not in itself an insurmountable obstacle to attracting outside investment. According to Becht et al. (2002), there are at least *five* ways to protect investor rights. They are (i) ownership concentration; (ii) the market for corporate control; (iii) delegation and concentration of control in the hands of the board of directors; (iv) executive compensation; (v) fiduciary duty. Liquidity of the equity market is exceptionally important for (iv), but the remaining mechanisms (with the exception of (v), which is hardly implementable in Russia), may be quite sufficient. This point is supported by Bergloef and Bolton (2002) who argue that in most Central and Eastern European countries investment is growing despite the underdeveloped stock markets. The main source of capital is foreign direct investment. Although the banking system is much more competitive in those countries than in Russia (due to the presence of foreign banks), bank loans mostly finance working capital rather than long-term projects. At the same time, as Bergloef and von Thadden (1999) point out, in transition economies large investors generally play a much more important role in corporate restructuring than small shareholders. Moreover, excessive protection of small shareholders may increase costs of takeover, thereby increasing transaction costs in the market for corporate control.[8]

1.3 The methodology

Using surveys of about 1,000 industrial enterprises and their official statistics, we shall try to establish relationships between the ownership structure, the level of corporate governance, demand for modern standards of corporate governance, and investment, depending on size, sectoral and regional characteristics. The methodology is predetermined by limitations due to Russian economic environment. First, non-transparency of the ownership structure, caused, among other things, by illegitimate nature of privatization and subsequent redistribution of ownership, causes us to rely on the results of ownership surveys, which reduces the size of the sample substantially.

Second, inefficiency of Russian legal institutions may change the relationship between corporate governance and ownership structure. In the above literature, ownership structure is endogenous to the level of legal protection of investor rights. In an economy with developed financial markets and secure property rights, capital structure, specifically, ownership structure, is endogenous and depends on the structure of a business, intertemporal structure of revenue streams, the size of a company and the nature of uncertainty. At the same time, in Russia, high transaction costs in the

[8] Radygin and Entov (1999), Radygin and Arkhipov (2001) also doubt the applicability of the Anglo-Saxon model of financial markets in Russia; the specific legal environment and structure of the economy may call for a special "Russian" model of corporate governance.

capital market slow down reallocation of corporate ownership. Certainly, ownership structure is not fully exogenous, but, as ownership changes more slowly than the level of corporate governance, we use the former as an exogenous variable. The low level of enforcement makes corporate governance an informal institution rather than a formal one. In developed countries the level of investor rights protection is mostly determined by legislation and thus is regarded as a given at the country level. In Russia corporate legislation is not enforced, hence protection of the rights of outside investors is voluntary rather than compulsory, with the level of corporate governance chosen at the firm level.

The endogeneity of corporate governance to ownership structure results in a somewhat surprising empirical hypothesis. In developed countries the high level of corporate governance is negatively correlated with ownership concentration – if the law does not protect the rights of outside investors, small investors prefer not to buy shares. In Russia, on the contrary, good corporate governance and high ownership concentration can be correlated *positively* – in order to introduce institutions of corporate governance, investors should be interested in prosperity of the company.[9] There may be different reasons why ownership concentration provides the controlling shareholder with incentives to protect rights of small investors. In the listed companies (or in the firms contemplating an IPO), the reason is simple: improved corporate governance raises market value. However, shares of most companies in our sample are not actively traded. In such firms, adoption of corporate governance mechanisms may be considered as a side deal between the controlling shareholder and small investors to prevent takeover. This mechanism should only work if the controlling shareholders lack the qualified majority to fend off all possible takeover threats.

Another distinguishing feature of informal institutions is that their implementation does not, as a matter of fact, require changes in legislation. Why wait for drafting and approval by parliament of a corporate conduct code if mechanisms that it provides can be introduced already at this point? This argument means that the Code mainly serves as an information and educational tool.

The paper is organized as follows. First it describes the sample and discusses the ownership structure of companies (Section 2). The following section attempts to find out how the current level of corporate governance depends on the size and ownership structure of a company, as well as sectoral and regional variables (Section 3). Section 4 estimates the influence of corporate governance and ownership structure on investment and on sources of finance.[10] Section 5 looks at the perception of the Code, estimating relationships between attitude to the Code as a whole or its specific standards, and the current level of corporate governance, ownership structure as well as sectoral and regional variables.

[9] An important distinction refers to assumptions about incentives for managers and private benefits of control. For example, in models studied by Hart (1995), the manager is interested in investment in order to expand her "empire". In Russia, the manager can obtain enormous private benefits without investment. The manager is interested in investment, which may bring profits only if he holds a sufficiently large stake in a business.

[10] We are not looking at how large the investment is. In many countries the low level of corporate governance results in excessive investment or investment failing to provide return on capital. We believe that the lack of investment in Russia in the 1990s makes *any* investment desirable.

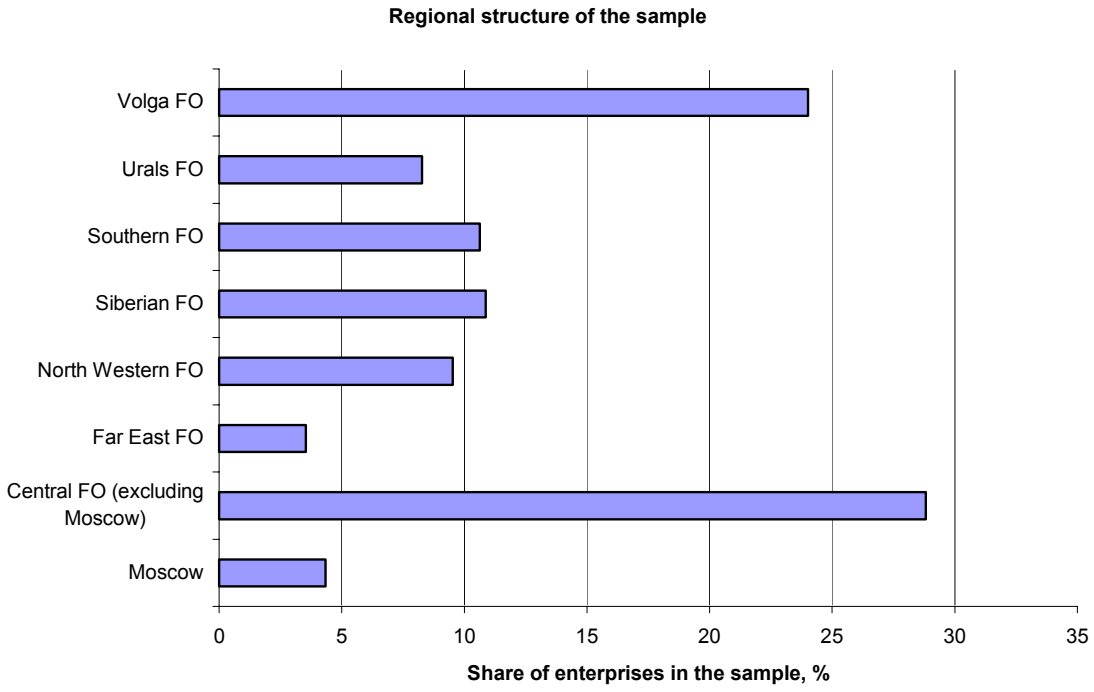
2 The sample

The study uses surveys of top managers of about one thousand industrial enterprises conducted by the Business Surveys Laboratory of the Institute for the Economy in Transition (IET). IET has developed and maintained a panel of top managers of industrial enterprises as part of monthly business surveys, which have been conducted since 1992 with the methodological support of the European Commission, Eurostat and OECD. The panel uses the "one enterprise-one-respondent" principle. The IET panel represents 22% of employment in the Russian industry. Chief executives account for 35% of the respondents, deputy directors – for 35%, and directors for economics and finance – 22% of the sample.

The IET panel includes enterprises of mostly manufacturing industries in all Russian regions. A total of 61 sub-industries are identified. This ensures more representative data than sampling based only on broadly defined industries. The questionnaires are sent out and collected by mail, which allows geographic representation of the data to be expanded substantially.

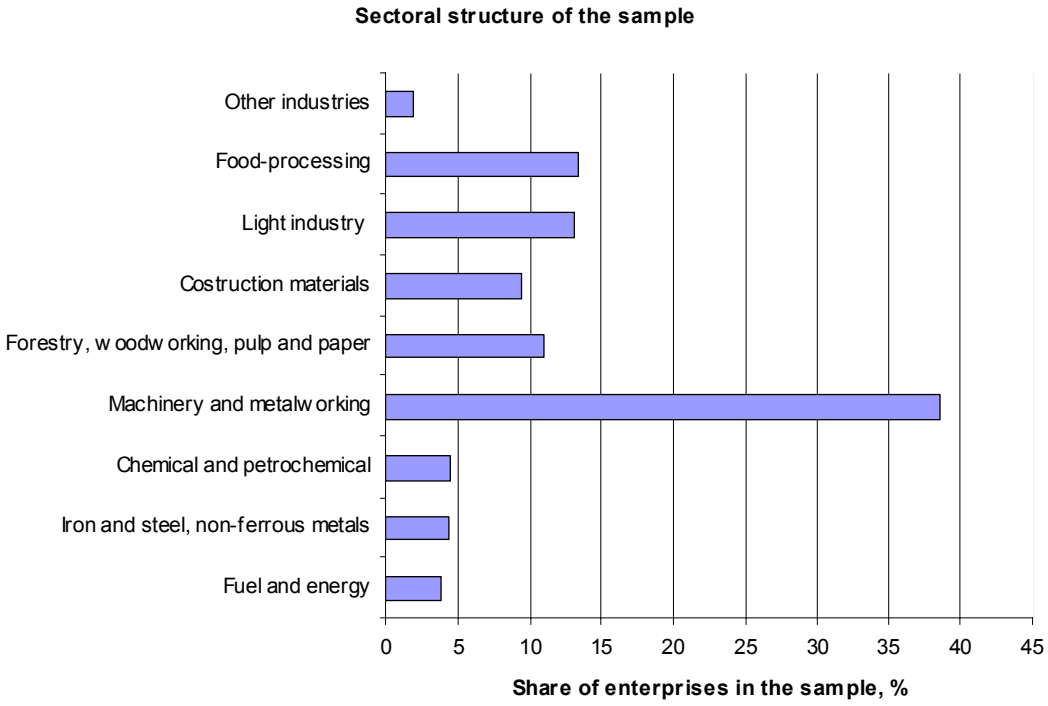
Figures 2.1-2.3 show the geographical and sectoral structure of the sample as well as distribution of enterprises by size (employment). Appendix compares the structure of the sample with that of the Russian industry as a whole (using the Goskomstat's Register of Industrial Enterprises).

Figure 2.1. The sample represents enterprises from all Russian regions. As in Goskomstat's Register, many enterprises are located in the Central Federal Okrug



The graph presents the distribution of firms by regions. FO stands for Federal Okrug.

Figure 2.2. The sample represents enterprises of all industries. Similarly to Goskomstat's Register, the machinery and metal processing accounts for the largest share



The graph presents the distribution of firms by broad industries.

Long-term confidential relations between IET and the respondents are especially important for this study. The reason is that most of the questions that we formulated are quite sensitive (at least in Russian environment), being concerned with corporate ownership and control. In September 2001, only 43% of respondents in IET surveys believed the official information on corporate ownership structure to be accurate.

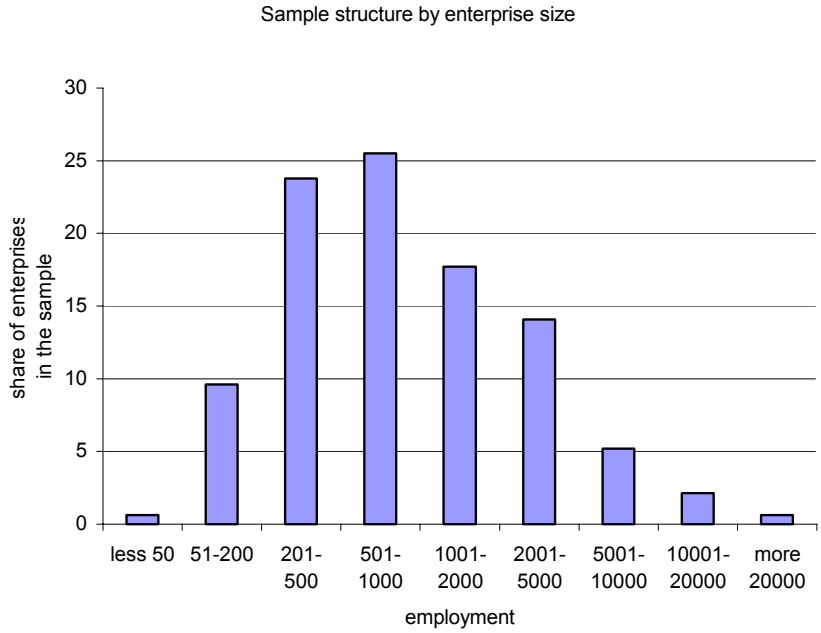
The use of survey-based statistics enabled us not only to obtain data on the ownership structure and the level of corporate governance, but also to find out managers' attitudes to the principal provisions of the Code.

Like most Russian enterprises, the companies in the sample do not have access to the stock market. There are no blue chip companies in the sample; none are on the RTS quotation lists of the first or even second tier. Only 30 companies (3% of the sample) are quoted in RTS, with shares of only 13 of them having been traded in 20 deals exceeding $100,000.

Table 2.4 presents data on the ownership structure. In companies with a large outside shareholder, such a shareholder controls the average of 40% of shares.[11] The average stake controlled by the largest outside shareholder is 24% for our sample (including companies which do not have large outside owners). The average managerial stake is 19%.

[11] Following literature on corporate governance, we deem outside shareholders to be all shareholders other than managers or employees of the company. The question arises whether it is appropriate to use the term of "outside" shareholders, who may de facto be affiliated with the management of the company. Certainly, it is difficult to trace such affiliations in practice.

Figure 2.3. The sample represents mostly medium-sized and large enterprises, although not the largest ones



The graph presents the distribution of firms by size categories.

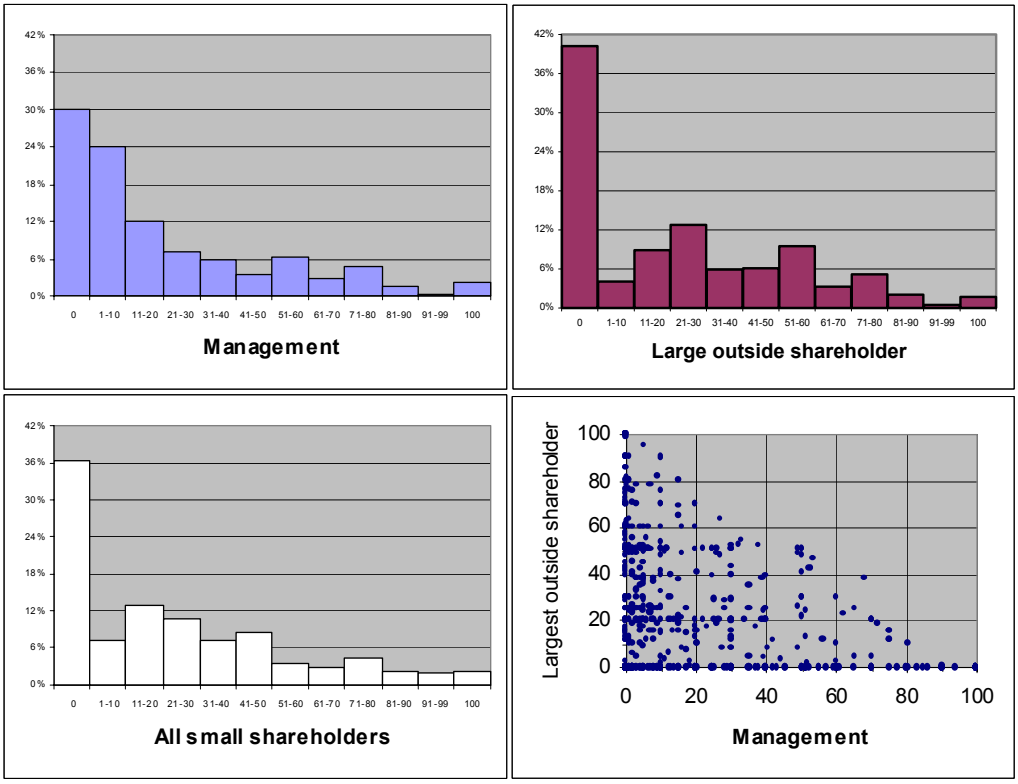
Table 2.4. Ownership structure

Shareholder category	Mean, %	Median, %	Standard deviation, %	Number of observations
Management	19.3	6	26.1	641
Largest outside shareholder	23.9	15	27.4	642
All small shareholders controlling less than 5% of shares	23.6	12	28.3	581
Only for enterprises where this category is present				
Management	27.7	16	27.2	448
Largest outside shareholder	39.9	38	24.8	384
All small shareholders controlling less than 5% of shares	37.0	30	27.5	370

Figure 2.5 presents a histogram of distribution of shares by shareholder category. As Figure 2.5 shows, the sample represents a wide variety of enterprises as regards ownership structure: enterprises with a dominant share of insiders, enterprises where an outside shareholder holds a majority or blocking stake,[12] and those with a large share of small outside owners (each holding less than 5% of shares).

The relationship between ownership structure and size is of special interest. As administrative costs of implementing the standards of the Code are relatively less important for large enterprises, demand for corporate governance should increase with size. Since the size of enterprises in our sample varies considerably,[13] it can be assumed that the ownership structure of large enterprises is substantially different from that of small ones. Also, one could expect that the larger the enterprise, the less concentrated the ownership structure; given the underdeveloped financial markets, purchasing a large stake in a large company is very costly. On the other hand, weak protection of minority shareholder rights may produce an opposite effect: the larger the enterprise, the greater private benefits of control enjoyed by managers and large shareholders, the greater benefit large shareholders can derive from infringing the rights of small shareholders.

Figure 2.5. Ownership structure is highly concentrated



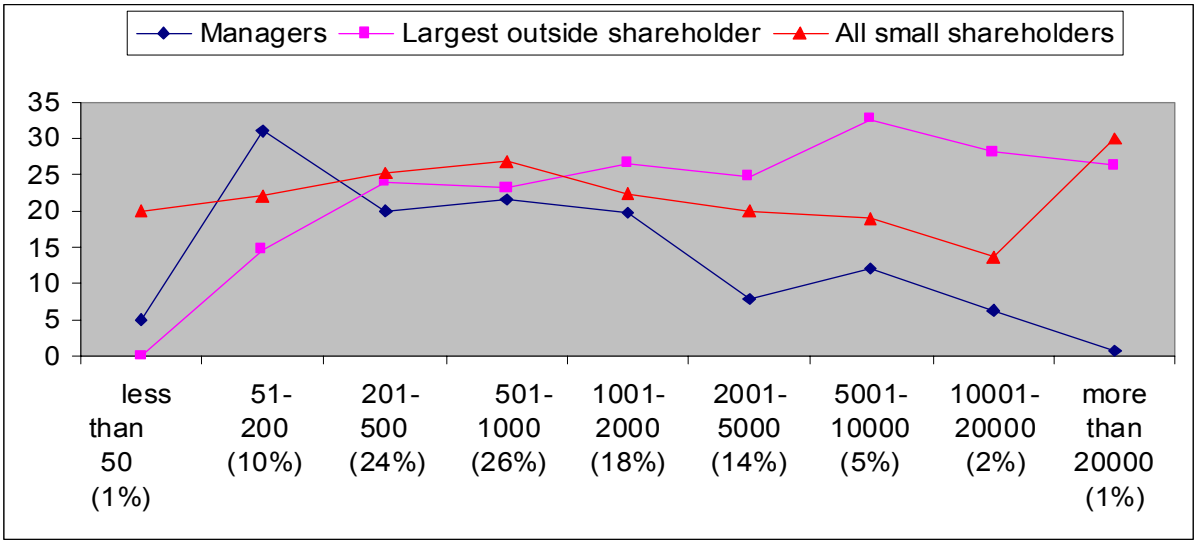
The figure shows histograms of distribution of shareholdings in the hands of (a) management, (b) the largest outside shareholder, (c) all small (smaller than 5% stakes) shareholders. The horizontal axis is the stake held by this category of shareholders on a percentage basis, the vertical axis is the share of relevant enterprises in which these shareholders hold the specified stake.
The last diagram is a point-by-point plot of joint distribution of stakes held by the management and the largest outside shareholders. Each point represents an enterprise; the share of management in the ownership structure of this enterprise is plotted along the horizontal axis, the share of the largest outside shareholder - along the vertical axis.

[12] As Figure 2.5 shows, large outside shareholders prefer to hold 25%, 50% and 75% stakes

[13] If the sample were sorted by sales, then the median enterprise of the upper half (i.e. the enterprise holding the 711th place by size in the sample of 948 enterprises, 711/948 = 75%) is 7.8 times larger than the median enterprise of the lower half (i.e. the enterprise holding the 237th place in the sample, 237/948 - 25%).

As figure 2.6 shows, both effects take place. First, due to interaction of these countervailing effects there is no correlation between size (employment) and the share of small shareholders. Second, the share of the largest outside shareholder does increase with the size of an enterprise, while the management stake declines.[14]

Figure 2.6. The larger the enterprise, the smaller the managerial share and the larger the share in the hands of large outside shareholders. The share of small shareholders does not depend on enterprise size.



The figure shows the relationship between the ownership structure and the size of the enterprise. The sample is broken down into nine groups by size (employment); the figure shows the average share of each ownership category, and the weight in of each size group in the entire sample (in parentheses).

[14] The relationship is the same between ownership structure and another indicator of size - the sales. If one enterprise is 10 times larger than another, then the average managerial share is 3.5% smaller, while the share of the largest outside owner is 4.3% larger. There is no correlation between sales and the share of small shareholders. However, the presence of small shareholders itself is really more likely at large enterprises (although the magnitude of the effect is small). At the same time, at enterprises with small shareholders, their combined stake declines as the size of the enterprise increases: with a 10-fold increase in sales the average share of small shareholders is 7.3% lower.

3 Quality of corporate governance in Russian industry

The Code includes standards of corporate governance, which can be adopted voluntarily even before the approval of the Code. Hence, in order to evaluate the demand for corporate governance, it is important to study the present level of corporate governance in the company rather than the management's intentions. This section presents the results of a study of the quality of corporate governance and factors affecting it.

3.1 Measures of corporate governance

To evaluate the quality of corporate governance, we formulated six relatively objective criteria, allowing evaluating various components of corporate governance. We asked the following questions:

Question 1. Do you use INTERNATIONAL ACCOUNTING STANDARDS (US GAAP/IAS)?

Question 2. Does your company have a DEPARTMENT FOR SHAREHOLDERS AFFAIRS?

Question 3. Do you provide AGENDA of all shareholder meetings to all of your shareholders?

Question 4. Are there INDEPENDENT DIRECTORS on the Board of Directors of your company?

Question 5. Are there REPRESENTATIVES OF MINORITY SHAREHOLDERS on the board of directors of your company?

Question 6. Is your company's registry of shareholders kept by an INDEPENDENT REGISTRAR?

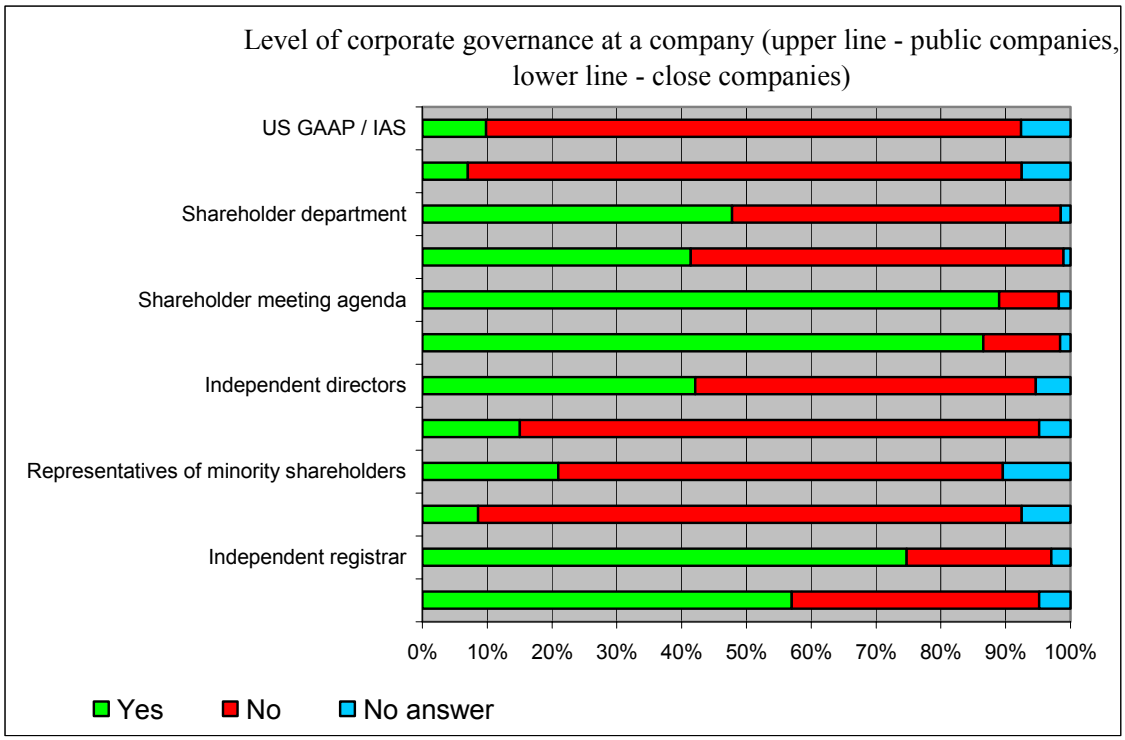
Not all of these norms are required by law. Providing agenda of shareholder meeting to all shareholders is stipulated by Russian corporate law. According to the Law on securities markets, if the number of security holders (including all types of shares and bonds) of the company exceeds 500, company is obliged to keep its shareholder registry with an independent registrar. International accounting standards are required only for listed firms when they are included in first level listing.

Answers to the questions of this questionnaire were provided by 672 public and 186 close companies. Distribution of the answers is shown in Figure 3.1.1. For each question, the upper bar shows distribution of answers of public companies, the lower bar – those of closely held companies. As can be seen from Figure 3.1.1, most indicators of corporate governance are similar for public and private companies. The only exception is the data on independent directors: they are much more often found on the boards of directors of public companies than on those of close companies.

There is a substantial variation in specific components of the quality of corporate governance. An overwhelming majority of companies notify shareholders of the shareholders meeting in a timely manner, but only about half of them use the services of an independent registrar. Only a few companies maintain accounting by international standards and have minority shareholders represented on the board of directors.

The components of corporate governance are positively correlated (Table 3.1.2). As can be seen from the table, there is a positive and significant correlation between all the components; for some components the correlation is very high.

Fig. 3.1.1.Level of corporate governance at Russian companies (both public and close) varies in a wide range. Quality of corporate governance at public companies is not much better than at the closely held ones.



The figure shows distribution of answers to questions 1 - 6 on the standards of corporate governance at a company. Answers provided by public companies (upper bar) and closely held companies (lower bar) are shown separately for each question. Dispersion of answers is fairly wide. The average number of positive answers (all questions) is 42%, negative answers - 53%.

One of the reasons for the high correlation between answers to the questions is that they are partly driven by the same determinants, in particular by the size of an enterprise. Per unit costs of corporate governance are lower at larger companies, hence the larger the size, the higher the probability that the company has already adopted some corporate governance practices. Figure 3.1.3 shows the relationship between the frequency of positive answers to the questions of the questionnaire and the numbers of employees, based on answers provided by 964 enterprises of various forms of ownership. Size does increase the likelihood that specific standards of corporate governance are used by the company. [15]

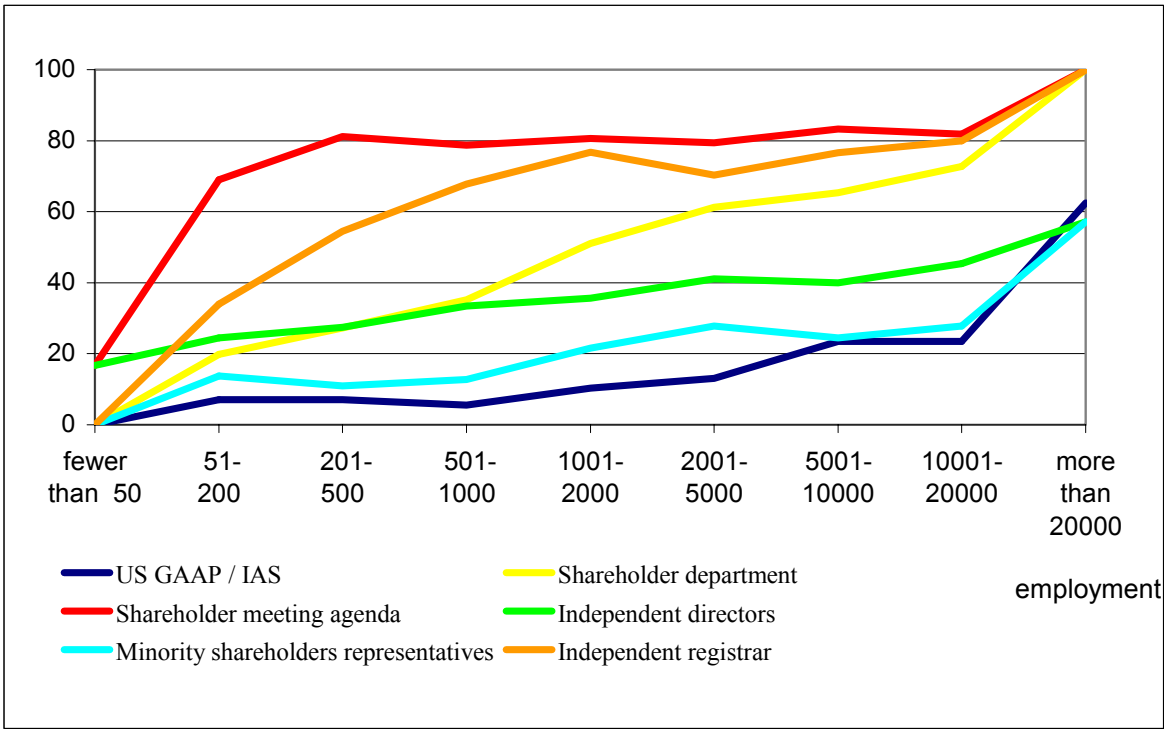
[15] The positive significant correlation holds if we use sales (rather than employment) as a proxy for size. The correlation ranges from 14% (independent directors) to 28% (shareholder department).

Table 3.1.2. All components of corporate governance are correlated

	Question 1	Question 2	Question 3	Question 4	Question 5	Question 6
Question 1	1					
Question 2	0.09*	1				
Question 3	0.07*	0.33*	1			
Question 4	0.05	0.15*	0.26*	1		
Question 5	0.07*	0.21*	0.21*	0.25*	1	
Question 6	0.08*	0.24*	0.46*	0.24*	0.23*	1

* - significance at the 5% level

Figure 3.1.3. The larger the enterprise, the higher the probability to adopt best practices of corporate governance



The figure shows the correlation between the share of affirmative answers to questions about corporate governance and company size. The shares of positive answers are averaged over size groups, which are shown on the horizontal axis.

3.2 Corporate Governance Index

Which of the six questions best describes the quality of corporate governance? Can a scalar index showing relative performance of companies as regards corporate governance be constructed? We checked if it is possible to build a linear ordering of the corporate governance elements, whether positive answer to one question implies positive questions to others. We have gone through all possible ordering; the best linear ordering is as following: *international accounting standards* ⇒ *representatives of minority shareholders* ⇒ *independent directors* ⇒ *shareholder department* ⇒ *agenda of the annual meeting* ⇒ *independent registrar* (i.e. if the company has IAS accounts, then it also has representatives of minority investors on the board etc). However, even this ordering includes only 514 firms out of 853 who responded to all six questions.

To build a scalar index of corporate governance, we used the principle component method. Table 3.2.1. shows eigenvalues and eigenvectors. The first component explains 35 per cent of total variation, which is markedly more than the explanatory power of the second and third components (16 and 15 per cent, respectively). The weight of six questions in the first principal component is about the same.[16] The weights of answers to the third (agenda) and sixth (independent registrar) questions in the first component are somewhat larger. The second component, on the contrary, is essentially comprised of the first question (international accounting standards) only. The third component includes the fourth and fifth questions with larger weight.

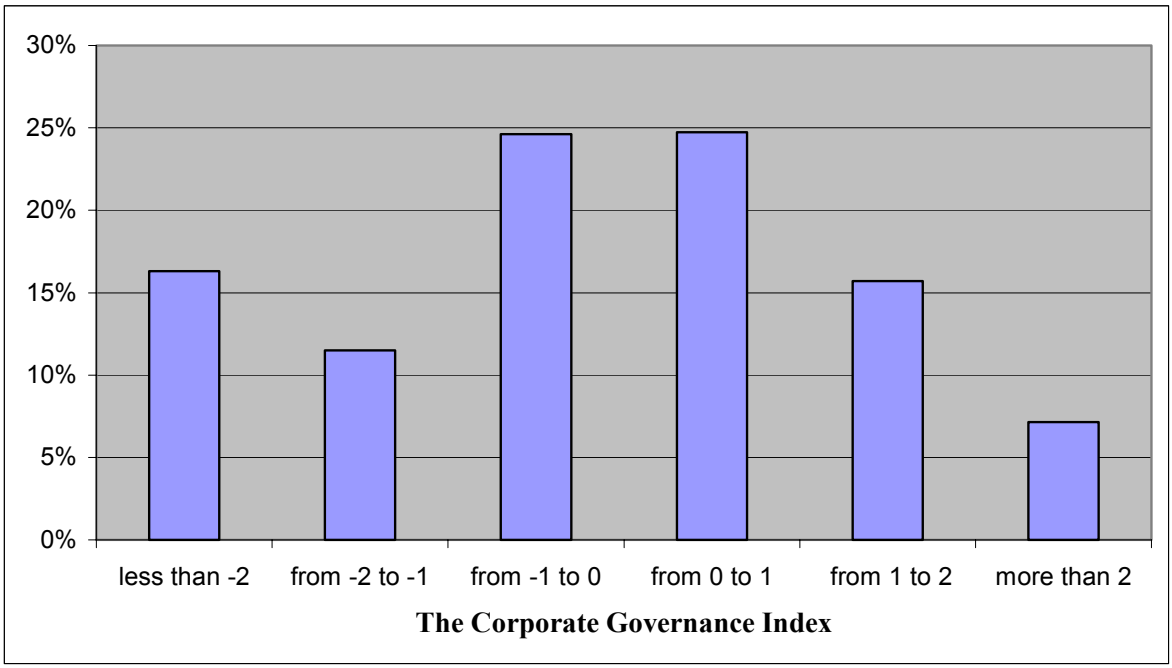
Table 3.2.1. A third of the variation in the level of corporate governance is explained by the first principal component, in which all elements of corporate governance, except for the first one (IAS) are represented with practically equal weights.

Component	Eigenvalue	Share of explained variation	Eigenvectors			
				1	2	3
1	2.10	0.35	Question 1	0.15	0.97	0.14
2	0.98	0.51	Question 2	0.41	0.10	-0.33
3	0.89	0.66	Question 3	0.51	-0.09	-0.36
4	0.81	0.80	Question 4	0.39	-0.18	0.57
5	0.71	0.91	Question 5	0.39	-0.09	0.58
6	0.51	1.00	Question 6	0.49	-0.07	-0.29

The Corporate Governance Index (the first principal component) is distributed in the range from -2.37 to 3.07 with a standard deviation of 1.45; the mean is normalized to zero. Figure 3.2.2. shows a histogram of distribution of its values. Although corporate governance of half of the enterprises is close to the average, a fairly large number of companies have either very good or very bad corporate governance.

[16] Correlation between the first principal component and an unweighted sum of answers to all the six questions is 99%. Further on we still use the principal component rather than the unweighted sum, since the latter takes a very limited number of values.

Fig. 3.2.2. Corporate governance of almost half of enterprises is close to average, but a fairly large number of enterprises have either very bad or very good corporate governance.



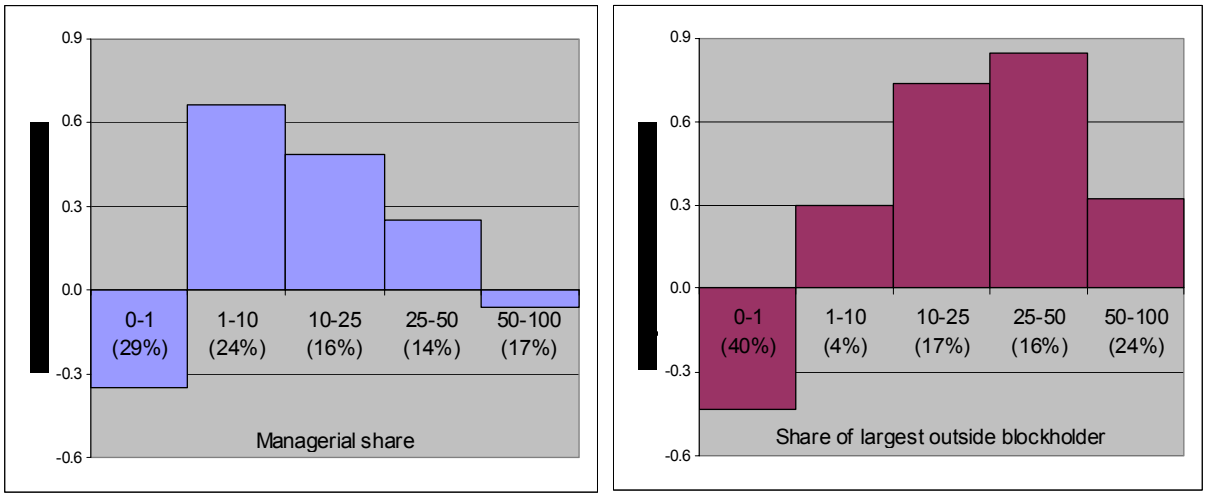
The distribution of the Corporate Governance Index (the first principal component of the six questions). The vertical axis is the share of companies with the relevant range of the Corporate Governance Index in the sample. The value of the Corporate Governance Index less than -2 represents negative answers to all six questions, the value higher than 2 corresponds to positive answers to five or six questions.

3.3 Determinants of the quality of corporate governance

In this section we study the relationship between corporate governance and ownership structure, sectoral and regional variables, etc. For simplicity we do not carry out a separate analysis for answers to each of the questions but study the determinants of the Corporate Governance Index introduced above.

The Corporate Governance Index increases with concentration of ownership in hands of management or by largest outside blockholder as long as concentration is not too high; then the quality of corporate governance begins to fall. Figure 3.3.1 presents the joint distribution of ownership concentration and index of corporate governance. Both for the management stake and for the case of largest outside blockholder, the relationship is bell-shaped with the largest part of the sample being located to the left of the peak. We estimated quadratic relationships of the corporate governance index on ownership concentration. It turns out that quadratic form functions describe the dependence of corporate governance index on the concentration of ownership much better than linear ones. Concentration of ownership in hands of outside blockholder improves corporate governance up to the level where ownership stake exceeds 50%, while for the management stake the threshold value is only 16%.

Fig. 3.3.1. Concentration of ownership up to a certain level is related to increasing level of corporate governance. Excessive concentration results in worse corporate governance.



The charts present relationship between the Corporate Governance Index and the shares of stock held by management and by largest outside blockholder. Figures under each column indicate range of ownership shares and weight of this category of ownership in the sample (in parentheses). Height of each column equals to the average CGI in this category.

To control for other determinants of corporate governance, we run OLS regressions (Table 3.1.2).[17] The effect of ownership structure on corporate governance is significant.[18] An increase in the small shareholders' stake is, as expected, correlated with better corporate governance. However, the relationship between corporate governance and the management's as well as a large outside owner's stakes is less obvious. It turns out that the larger the managerial and a large outside owner's stakes, the *better* corporate governance. Thus, consolidation of the stake provides incentives for large inside and outside investors to improve corporate governance.

However, as shown by specifications (4) - (6), this effect is not monotonic or at least not linear. Specification (4) estimates quadratic relationship. The coefficient at the squared share of the largest

[17] Regressions for specific components of corporate governance produce similar results.

[18] The use of ownership structure as an exogenous variable in this and other regressions is discussed in Section 1.3.

outside owner is negative and significant.. The effect of concentration of ownership on corporate governance is positive if the large outside owner holds a small stake, but becomes negative once the stake exceeds approximately 50%. The coefficient at the squared share of the management is also negative but is not significant.

Columns (5) and (6) present further tests of the non-monotonicity of the relationship between concentration of ownership and corporate governance. Column (6) shows the estimates for the companies where the stake of the largest outsider shareholder exceeds 50%. It turns out that for this (albeit a very small) subsample concentration of ownership does affect corporate governance negatively and significantly. Column (5) presents the estimates for a piecewise linear specification; we allow different slopes for companies with high and low ownership concentration. Again, the effect of ownership concentration on corporate governance is positive and significant as long concentration is sufficiently low; after then the effect becomes significantly lower (and, actually, does not significantly differ from zero).

Therefore, an increase of the stake in the hands of management or the largest outside owner positively affects corporate governance until this stake exceeds certain level. Once the concentration is sufficiently high, the effect becomes negative (in some specifications) or insignificant. In case of outside blockholders, the critical level of concentration is 50%, in the case of managerial stake it is much lower. [19] A relatively small number of firms with ownership concentration above the critical level does not allow us claiming whether corporate governance worsens or remains the same with further increase in concentration of ownership.

The source of the bell-shaped relationship may be as follows. If one shareholder holds a qualified majority, then voluntary institutions of corporate governance cannot protect small investors anymore, hence it does not make sense to implement them.

The other variables play a less important role. In all specifications, corporate governance improves with size. Availability of funds on the company account (variable *Liquidity* = cash balance/annual sales) worsens corporate governance – companies which have idle cash do not need to attract outside investors. We have also included financial indicators, such as ratio of liquid assets to short-term receivables and labor productivity relative to industry average (for 5-digit industries). These variables are not significant. Effect of the share of exports in revenues is insignificant, probably due to sectoral differences. Closely held corporations have a lower level of corporate governance but differences are insignificant in most of the specifications.

Industry-level variation in the level of corporate governance is presented in Table 3.3.3. Average value of the index of corporate governance differs significantly by industry. However, if we control for other factors, including size of a firm and export orientation, only forestry, food industry and construction materials industry significantly differ from others, having lower quality of corporate governance.

[19] Morck, Shleifer and Vishny (1988) evaluate the relationship between the managerial ownership and the market value of the company and find it to be nonlinear. Managerial ownership affects the value of the company positively if the managers' stake is no more than 5%, and negatively if the stake is 5% to 25%, positively again if this share exceeds 25%. The authors explain this by combination of two opposite effects: the positive impact of incentives created by ownership, and the negative effect of the entrenchment of managers when their stake increases.

Table 3.3.2. Determinants of corporate governance. The dependent variable is the Corporate Governance Index.

	(1)	(2)	(3)	(4)	(5)	(6)
Mgmt	0.561*	0.764**	0.682*	0.892*	3.638**	-2.014+
LargeOutside	0.949**	1.080**	0.856**	2.070**	2.731**	-2.138*
Small		0.984**	0.788*	0.786**	0.701**	
Mgmt_sq				-0.637		
LOutside_sq				-3.697**		
Mgmt* *(Mgmt >0.25)					-2.911**	
LOutside * *(LOutside>0.50)					-1.887**	
Log sales	0.226**	0.225**	0.277**	0.213**	0.221**	0.133+
Liquidity			-3.584+			
Export/sales	0.589	0.571	0.302	0.470	0.737+	0.163
Closely held dummy	-0.217	-0.311+	-0.479*	-0.198	-0.221	-0.511
Industries	nonsign.	nonsign.	nonsign.	+	+	**
Moscow	-0.870**	-0.933*	-0.820	-0.692**	-0.845**	-1.865**
Far-East FO	0.347	0.165	0.166	0.079	0.068	-0.562
N-West FO	0.034	0.061	0.431	0.008	0.003	0.657
NFO	-0.299	-0.458+	-0.669*	-0.523**	-0.475+	-1.042+
SFO	-0.052	-0.198	-0.063	-0.245	-0.273	-0.214
UFO	-0.754**	-0.770**	-0.407	-0.831**	-0.772**	-1.119+
PFO	-0.200	-0.251	-0.092	-0.164	-0.161	-0.354
Observations	*327*	*300*	*217*	*300*	*300*	*73*
R^2	*0.25*	*0.30*	*0.29*	*0.34*	*0.36*	*0.56*

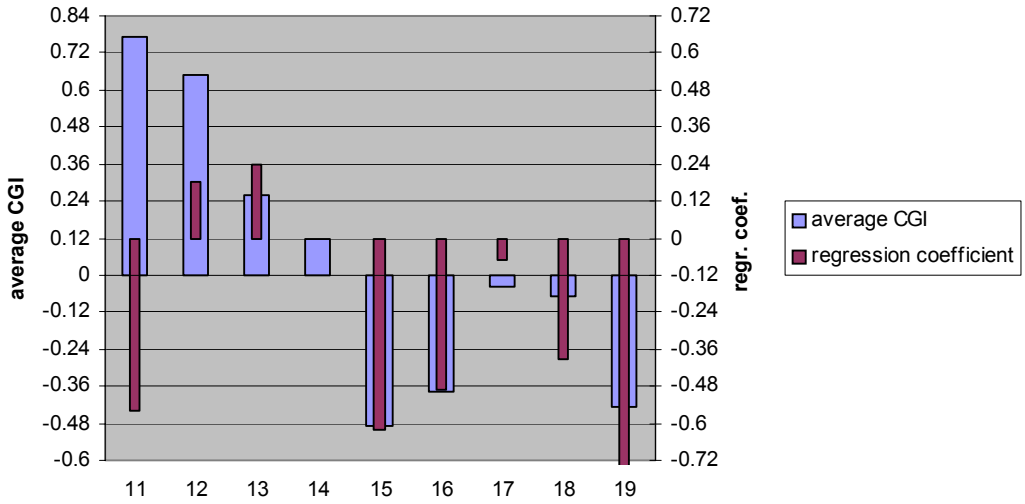
+significant at 10%, * significant at 5%, ** significant at 1%. The table presents OLS estimates with robust standard errors. The definitions, descriptions and summary statistics of the variables are given in the Appendix. The dependent variable is the Corporate Governance Index described above. Columns (1)-(5) present estimates for the whole sample, column (6) includes observations where the largest outside blockholder holds more than 50% stock. LOutside_sq is the squared mean adjust share of the LargeOutside, i.e. LOutside_sq = $(\text{LargeOutside}-0.24)^2$. LOutside>0.50 is a dummy for observations where the largest outside blockholder holds more than 50% shares.

Table 3.3.3. Corporate governance is significantly worse in forestry, food industry and construction materials industry (both in averages and in regression results).

Industries		CG Index, average (std.deviation in parentheses)	Regression coefficient (std.error in parentheses)
11	Power and fuel	0.77 (1.46)	-0.56 (0.40)
12	Iron and steel, non-ferrous metals	0.65 (1.38)	0.18 (0.34)
13	Chemicals and petrochemistry	0.26 (1.54)	0.24 (0.31)
14	Machinery and metalworking	0.12 (1.58)	0
15	Forestry, woodworking, pulp and paper	-0.49 (1.40)	-0.62** (0.23)
16	Construction materials	-0.38 (1.15)	-0.49* (0.22)
17	Light industry	-0.04 (1.29)	-0.07 (0.21)
18	Food-processing	-0.07 (1.21)	-0.39* (0.20)
19	Other	-0.43 (1.29)	-0.94 (0.57)

* significant at 5%; ** significant at 1%. In columns 5 and 6 we present coefficients and standard errors of industry dummies from regression for CG index (Table 3.3.1., specification (5)). Base category is machinery and metalworking.

Fig. 3.3.4. Corporate governance by industry.



Picture presents average values of corporate governance index (left scale) and coefficients of industry dummies (relative to machine building) from regression (last column of Table 3.3.2) for corresponding industries.

4 Investment

The main purpose of any corporate governance reform is improvement of the investment climate, creation of conditions for attracting outside investment. In this Section we shall attempt to estimate the relationship between the investment as well as sources of finance and the Corporate Governance Index constructed in the previous section. Results obtained above raise doubts that corporate governance affects investment directly. Russian companies (at least those in our sample) are very different from the model of "separation of ownership and control" by Berle and Means (1932): many of those companies are controlled by one outside or inside owner; hence investment does not necessarily have to depend on small shareholders protection. Moreover, the nonlinearities discussed above suggest that the relationship between corporate control and investment may be very complex.

4.1 Investment and sources of finance

Table 4.1.1 shows answers provided by companies to the question whether they invest and what financing they use. Most of the companies (77.6%) reported that they invested in the year prior to the survey. Investment was mostly financed from internal funds. Only 20% of enterprises financed investment through bank loans, less than 1% – through new equity issues. Only seven firms in a sample ever issued bonds. These figures are consistent with Goskomstat data about the situation in Russian industry as a whole (see Appendix). It should be noted that results obtained are not very different from data for transition (Bergloef and Bolton) and developed countries (Myers, 2000).

Table 4.1.1. Investment and sources of finance

	Share of companies, %
No investment	22.4
Investment using internal sources	66.1
including investment using only internal sources	49.3
Bank loans	21.3
New share issues	0.7
Other sources	6.2
Number of companies	947

Distribution of answers to the question «What finance sources did you use for investment in the past (2001) year? ». The sum of answers exceeds 100% because respondents could choose more than one answer.

Table 4.1.2 presents various characteristics of companies with regard to the sources of finance. Ownership structure does not play a major role, with the sole exception of the share of small shareholders. The larger the stake controlled by small shareholders, the less outside investment the company attracts.[20]

[20] This counterintuitive relationship disappears in OLS regressions once we control for other determinants of investment finance. However, the negative correlation between the number of small shareholders and investment attraction may be due to an increase in company management costs where there are small investors.

Table 4.1.2. Company characteristics as regards investment finance sources

	Investment finance sources					
	Total	None	Own funds	Loans	Share issues	Other
Average share of a large outside owner	23.9	22.8	23.8	26.8	30.4	29.5
Average managerial stake	19.3	17.2	20.4	19.7	6.0	13.6
Average stake of small shareholders	23.6	24.8	24.6	18.6	36.4	26.5
Corporate Governance Index	0	-0.2	0.2	0.2	1.9	-0.2
At what HIGHEST rate of interest are you prepared to take a LONG-TERM bank loan?						
1) not required	25.8	36.0	29.1	19.8	14.3	33.3
2) 5-10%	52.3	55.6	64.3	70.9	85.7	62.8
3) 11-20%	5.7	7.4	6.1	9.3	0.0	2.0
4) >20%	0.5	1.1	0.5	0.0	0.0	2.0
Industries						
11.Power and fuel	3.9	0.9	4.8	2.4	0.0	6.8
12. Metallurgy	4.4	3.1	5.3	7.3	0.0	0.0
13. Chemicals	4.5	4.4	4.4	4.4	33.3	6.8
14. Machinery	38.5	38.3	42.4	35.4	44.4	32.2
15. Woodworking	10.9	13.7	9.5	8.3	11.1	15.3
16. Construction materials	9.5	11.0	9.1	7.8	0.0	10.2
17. Light	13.2	18.5	10.1	13.1	11.1	11.9
18. Food-processing	13.4	8.4	13.1	18.0	0.0	13.6
19. Other	1.8	1.8	1.3	3.4	0.0	3.4
Size						
1-500 employees	34.3	49.3	28.0	30.1	22.2	25.4
500-1000 employees	25.7	27.3	25.0	19.9	0.0	33.9
1000-5000 employees	32.0	21.2	35.5	38.4	66.7	33.9
over 5000 employees	8.0	2.2	11.6	11.7	11.1	6.8
Number of firms	1261	227	640	206	9	59

Figures in the left column are means for each category of investment and source of finance.

Sectoral characteristics are also important. Exporting industries invest more but mostly from own funds. Industries selling to the domestic market invest less and have to rely on outside sources of finance.

The question about the interest rate at which a company is prepared to take loans gives an idea of the rate of return on investment projects, or at least of the management's perception of return. Answers cited in Table 4.1.2 show that enterprises with a low rate of return tend not to invest or invest relying on their own funds (less frequently), while companies with a higher rate of return invest, relatively often relying on outside sources of finance.

The most interesting result is the absence of correlation between investment and corporate governance. Although there is a positive relationship between investment and the Corporate Governance Index, the magnitude of the effect is small. In addition, corporate governance does not

affect access to credit. Certainly, corporate governance substantially enhances the chances of raising capital by new share issues (this effect is statistically significant), but the number of such companies in our sample is very small.

4.2 Determinants of investment

Table 4.2.1. shows the results of estimation of correlation between investment and some variables, such as ownership structure, size, profitability, sectoral and regional features, share of exports in sales, etc. These results suggest that if size, sector and ownership structure are controlled for, investment does not depend on corporate governance. Since corporate governance and ownership structure are correlated, it is important that the effect of ownership structure is significant, while that of corporate governance is not. Consolidation of ownership in the hands of administration and a large outside owner increases the probability of investment (at a given level of corporate governance), while the effect of corporate governance is not significant.

This may be explained by the excessive concentration of ownership. To test this hypothesis we included variable *Small*CGI* (the small shareholders' stake multiplied by the Corporate Governance Index) in the regression. The coefficient is positive and significant – the share of small shareholders and the level of corporate governance are complementary in terms of investment. The larger the share in the hands of small shareholders, the more corporate governance affects investment.[21]

We also included term *Mgmt*CGI* in the regression in order to see whether the relationship between consolidation of ownership in the hands of management and corporate governance is substitutional or complementary.[22] The coefficient at the *Mgmt*CGI* is negative and significant, which means that corporate governance and ownership concentration are substitutes. Although the level of corporate governance does not affect investment by itself, it weakens the positive effect of ownership consolidation in the hands of management. The higher the level of outside shareholder protection, the less control each additional percent of shares gives the management, and, consequently, the less investment there is. The effect of the other factors is predictable: the size and profitability of the company increase the likelihood of investment. The fuel and energy sector invests much more than others. Sectoral variables absorb the effect of the share of exports in sales; the latter is insignificant.

[21] In specification (3), the effect of the CGI equals -0,016+0.129*Small. Thus in the absence of small shareholders, the effect of corporate governance is insignificant (even negative). However, if the share of small shareholders is, for example, 50%, then the effect of corporate governance is positive and quite large (-0.016+0.129*0.5=0.048).

[22] We also attempted to include *LOutside*CGI* in the regression, the coefficient at this variable was insignificant, while the other coefficients did not change.

Table 4.2.1. Investment does not depend on corporate governance

	(1)	(2)	(3)	(4)
Log sales	0.064**	0.048**	0.043**	0.070**
Profitability	0.498**	0.580**	0.515**	0.763**
Demand for credit	0.029	0.023	0.036	
Mgmt	0.100	0.146+	0.117+	0.196*
Large outside	0.161*	0.139*	0.112*	0.133+
Small	0.061	0.054	0.033	
CGI	-0.012	0.018	-0.016	0.006
Mgmt*CGI		-0.156**	-0.112*	-0.150*
Small*CGI			0.129**	
Exports	-0.057	-0.030	-0.050	0.027
Metallurgy	-0.963**	-0.971**	-0.981**	-0.953**
Chemicals	-0.963**	-0.972**	-0.981**	-0.948**
Machinery	-0.972**	-0.989**	-0.991**	-0.985**
Woodworking	-0.956**	-0.983**	-0.990**	-0.974**
Construction materials	-0.966**	-0.976**	-0.985**	-0.967**
Light	-0.979**	-0.985**	-0.992**	-0.975**
Food-processing	-0.954*	-0.979*	-0.948**	-0.975**
Reconstruction plan				0.030
Number of observations	*188*	*188*	*188*	*231*
Pseudo R^2	*0.30*	*0.35*	*0.40*	*0.30*

+ significant at the 10%level; * significant at the 5%level; ** significant at the 1% level. The dependent variable takes the value of 0 if there was no investment in the previous year and the value of 1 if there was investment. The table presents estimates of marginal effects obtained by a probit regression. Regional variables (not shown) are insignificant. CGI is the Corporate Governance Index.

4.3 Determinants of sources of finance

Corporate governance may affect not only availability of investment but also the sources of investment finance. Table 4.3.1. presents estimates of the relationship between the probability of outside investment (if any) and various characteristics of a company. Most of the factors are insignificant, including size, ownership structure and corporate governance. Outside investment is mainly explained by only two variables: available liquid assets and the existence of a reconstruction plan. This suggests that outside finance is costlier than internal funds. Note that inclusion in the regression of the variable *Liquidity* doubles the explanatory power of the regression.

The availability of the reconstruction plan doubles the probability of financing from outside sources. This is also a predictable result but it raises another question: what does the existence of the plan itself depend on? The Appendix provides the results of regressions, which show that the presence of a reconstruction plan is positively correlated with the size of the company and the stake held by the largest outside owner.

Another interesting result is that in some specifications the share of small shareholders *adversely* affects the probability of outside investment. This, however, is unsurprising, given that the bulk of outside investment is financed by bank loans rather than share issues.

Remark. Sections 4.2 and 4.3 estimate the relationships for the availability of investment and for investment finance sources separately. These variables are certainly not independent and should, as a matter of fact, be estimated jointly. The Appendix provides the results of multinomial logit estimation, which are not different from probit-estimates of sections 4.2 and 4.3.

Table 4.3.1. External finance is more likely in firms who have less cash and in firms that have a reconstruction plan. Ownership structure and corporate governance do not significantly affect the sources of finance.

	(1)	(2)	(3)	(4)	(5)	(6)
Log sales	-0.006	-0.004	-0.022	0.031	-0.042	-0.011
Liquidity	-3.476**	-3.028*		-0.892	-2.593**	-3.676**
Reconstruction plan	0.180*		0.067	0.177*	0.186*	0.189*
Manager	-0.204	-0.244	-0.099	-0.140	-0.053	-0.224
Large outside	0.063	0.136	0.193	0.069	0.102	
Small	-0.279+	-0.314*	-0.196	-0.170		-0.288+
CGI	0.003	0.017	0.018		0.012	0.004
Exports	0.026	-0.007	-0.095	-0.042	-0.049	0.035
Far East	0.126	0.098	-0.103	0.079	0.093	0.132
North West	-0.063	-0.069	-0.088	-0.053	-0.111	-0.085
Siberia	0.214	0.232	0.127	0.266+	0.049	0.206
South	-0.220	-0.192	-0.159	-0.209+	-0.241+	-0.220
Urals	0.199	0.186	0.191	0.060	0.173	0.204
Volga	0.222*	0.232*	0.093	0.219*	0.237*	0.230*
Number of observations	*157*	*158*	*201*	*203*	*176*	*159*
Pseudo R^2	*0.20*	*0.18*	*0.10*	*0.14*	*0.16*	*0.20*

+ significant at the 10% level; * significant at the 5% level; ** significant at the 1% level. The table presents estimates of marginal effects obtained by the probit regression. The dependent variable takes the value of 0 if the company invested using only own funds and the value of 1 in the opposite case (only for companies which invested). Sectoral variables were included in the regression but are not shown (insignificant).

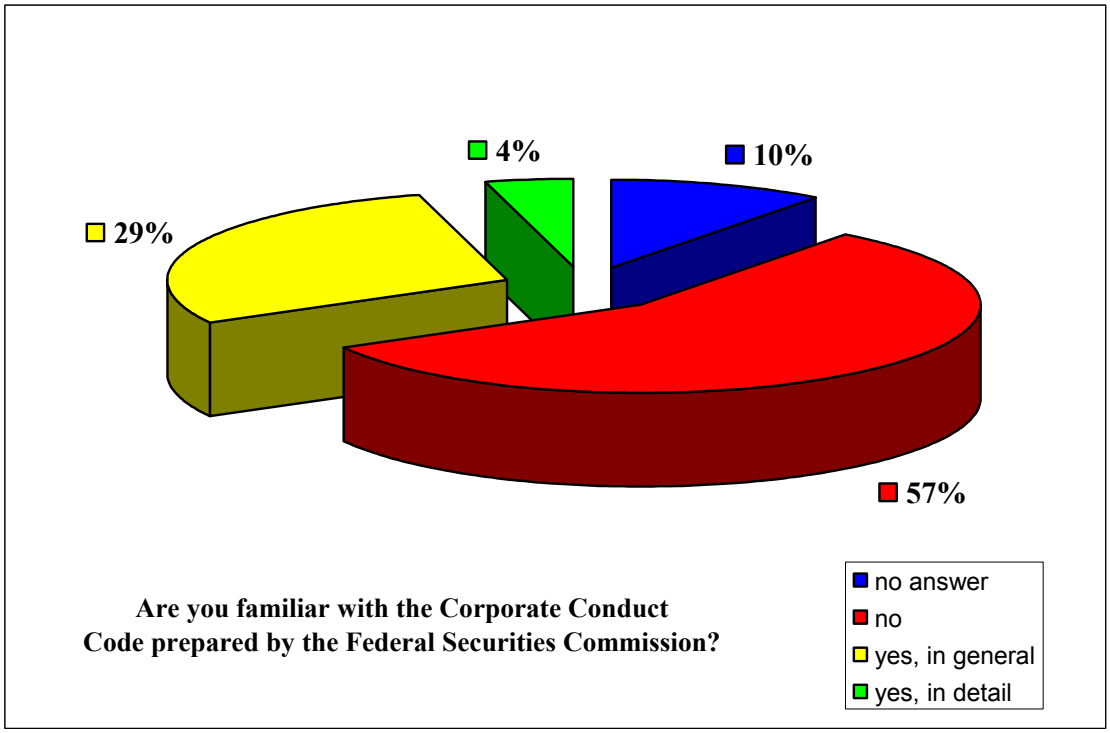
5 The Code of Corporate Conduct

The previous sections studied measures to improve corporate governance, which were actually implemented by companies, and inside and outside investment. In this section we are interested in managers' attitude towards the Code per se and their *intentions* to adopt specific rules and norms of the Code.

5.1 Awareness of the Code

The study of attitudes towards the Code should begin with an evaluation of companies' awareness of its existence and specific rules and standards provided by it. A third of respondents said that they had general understanding of the Code or knew it in detail.

Fig. 5.1.1. Every third company is familiar with the Code but only 4% of them know its contents in detail.



Distribution of answers. 100%=887 companies. This was only one of many questions of the questionnaire (see Appendix). Ten per cent of respondents who answered at least one question of the questionnaire did not answer this question.

Seven questions of the questionnaire were concerned with acceptability of specific provisions and standards of the Code. Companies were to choose from three alternative answers supplied (acceptable, unacceptable, and hard to tell). Companies familiar with the Code were more likely to answer positively, which points to the educational role of the Code.

Table 5.1.2. Companies familiar with the code answer questions about acceptability of its specific rules and standards in a more definite way

	Could not answer all 7 questions about acceptability of specific provisions of the Code	Answered definitely at least one question about acceptability of specific provisions of the Code	Total
Not familiar with the Code	123	280	403
Familiar with the Code	24	244	268
Total	147	524	671

5.2 Demand for corporate governance

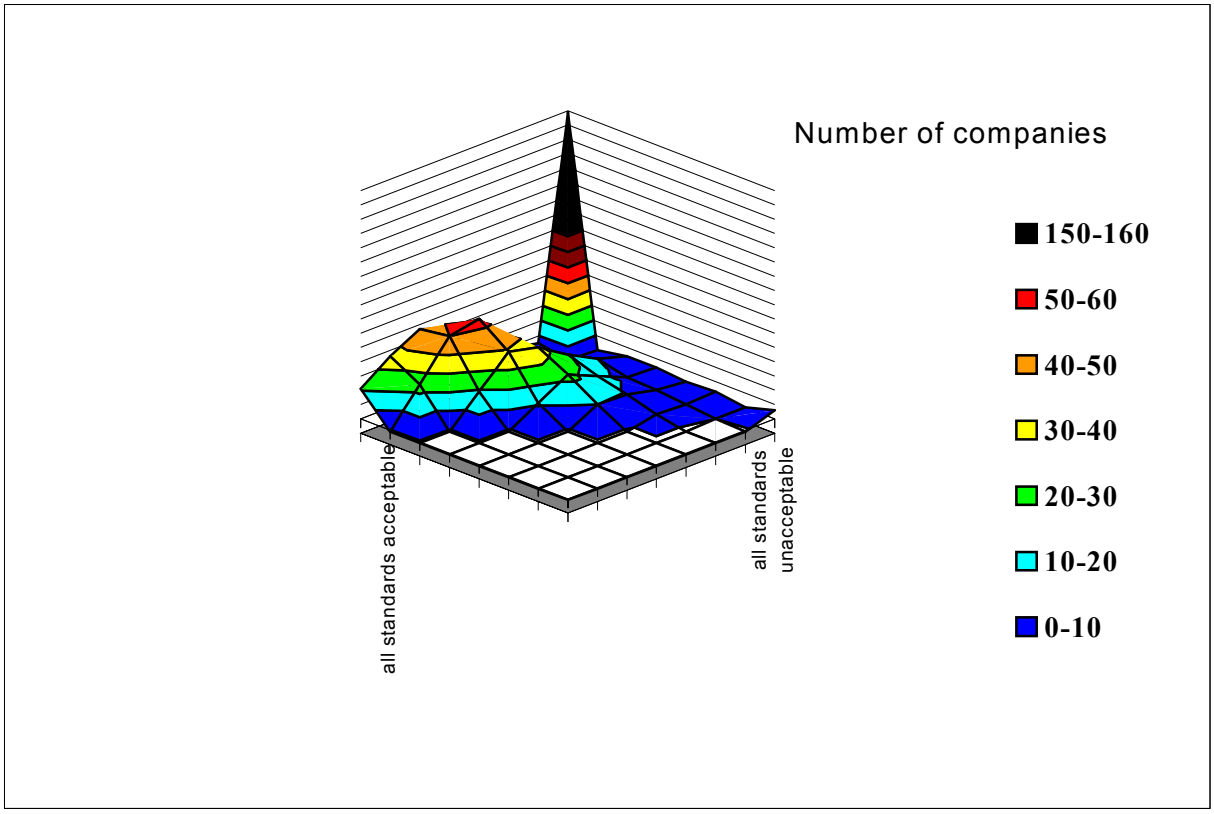
Table 5.2.1 provides summary statistics of answers by 886 companies to the questions about acceptability of specific provisions of the Code and the Code as a whole, as a percentage of the number of respondents. The acceptability of various provisions of the Code varies greatly, while the question about acceptability of the Code as a whole was answered by a markedly smaller number of companies. Companies, which did not answer the question about acceptability of the Code as a whole, also were less likely to answer definitely to questions on specific provisions.

Figure 5.2.2 shows the distribution of answers to all of the seven questions of the questionnaire about the acceptability of specific rules and standards of the Code. The peak in the upper corner represents 159 companies, which could not provide a definite answer to any of the seven questions. Six companies answered that all provisions and standards of the Code were unacceptable to them (the bottom right-hand corner). The largest number of companies is closer to the bottom left-hand corner. These companies answered that most provisions of the Code were acceptable to them.

Table 5.2.1. Company managers find most provisions of the Code acceptable except for the requirements for information disclosure and appointment of independent directors

	yes, all companies with more than 1,000 shareholders must do so	yes, we are all prepared to that voluntarily	No	Total
	Percentage of all firms in the sample			
Are you prepared to disclose information about degree of conformity of your corporate governance practices to the recommendations of the Code?	14	33	20	67
What do you think of acceptability of adoption by your company of key provisions of the Code (taking into account the required "cash" costs)	**acceptable**	**unacceptable**	**not sure**	**Total**
Allowing all shareholders full, equal and timely access to information about the company (specifically at a shareholders meeting)	49	8	28	85
Information disclosure to public at large (in a prospectus, quarterly and annual reports)	28	23	33	84
Control over insider information, compliance with prohibition to use confidential insider information about the company for private purposes	24	7	52	84
Election of independent directors to the board of directors	27	22	35	84
Safeguarding of small shareholder rights in conducting major deals and reorganizations (preemptive right, approval by the general meeting)	28	17	39	84
Engagement of an independent appraiser in conducting major deals and reorganizations, independent audit	48	7	29	84
Clear rules for dividend distribution	49	5	30	84

Figure 5.2.2 Most of the companies that are familiar with specific provisions of the Code find them acceptable.



The figure shows the distribution of answers to the questions about acceptability of specific provisions and standards of the Code. The horizontal axes are the numbers of provisions of the Code which this company finds acceptable (the left axis) and unacceptable (the right axis). The number of companies is plotted along the vertical axis (indicated also in color). The distribution has two peaks. First, the peak in the far corner, showing companies which found it difficult to appraise acceptability of all of the seven provisions. The second peak is on the left, i.e. it represents companies, which find most of the provisions or standards acceptable. There are practically no companies in the right part of the diagram. Thus, companies which are prepared to appraise acceptability of specific provisions, find them more acceptable than unacceptable.

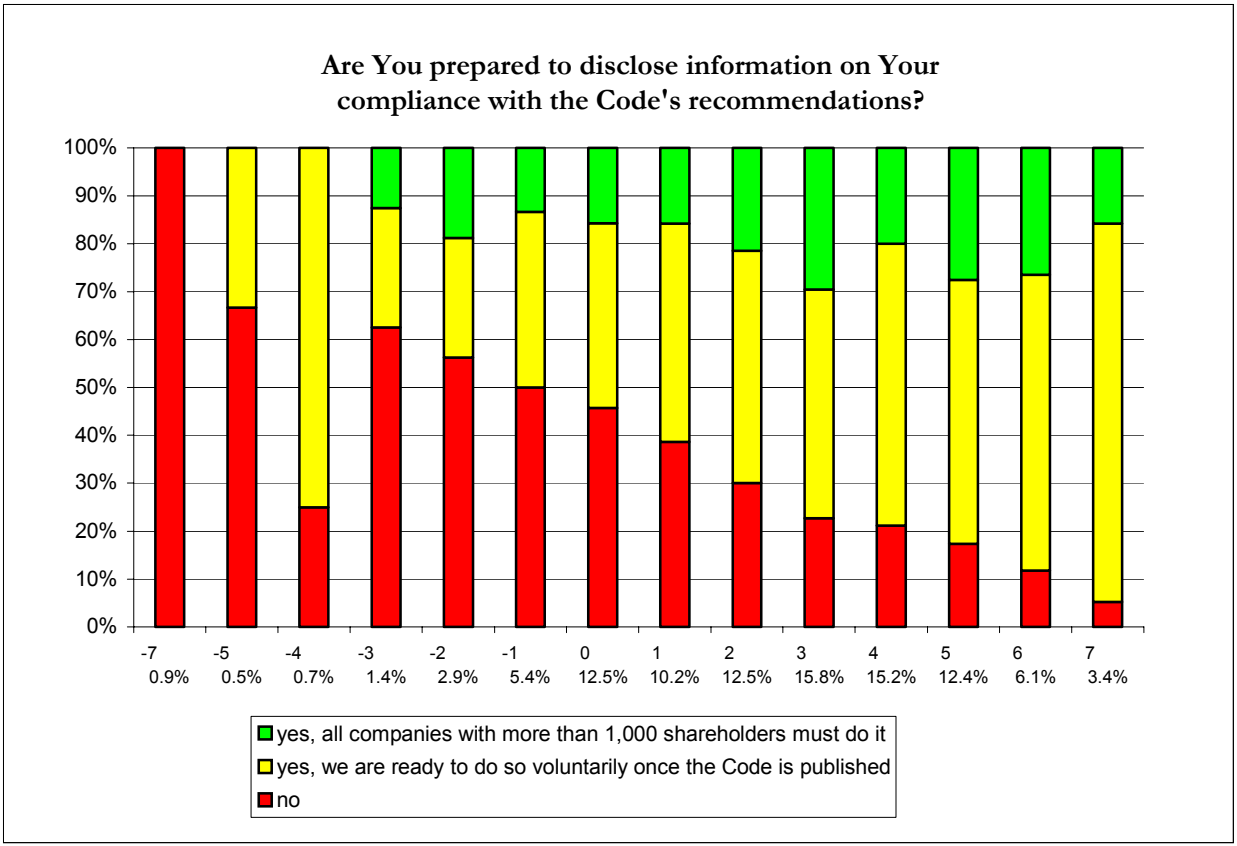
The larger number of provisions is acceptable to the company, the higher the probability that the Code is acceptable as a whole. This relationship is shown in Figure 5.2.3.

Answers to the questions about acceptability of specific provisions of the Code are correlated with one another (Table 5.2.4). To construct the scalar index of firms' attitude to the Code, we used the method of principal components. The results are shown in Table 5.2.5. The first component explains 30 per cent of the total variation, which is markedly more than the explanatory power of the second and third components (14 per cent each). The weights of the seven questions in the first principal component are roughly equal.[23]

Thus, in addition to information on acceptability of the Code as a whole, we constructed the index of demand for specific provisions and standards of the Code.

[23] Correlation between the first principal component and the unweighted sum of positive answers to the questions about specific provisions of the Code less the sum of negative answers is 97%.

Figure 5.2.3 The greater number of Code provisions and standards are acceptable to the Company, the higher probability that the Code is acceptable as a whole



The figure shows distribution of answers with respect to specific provisions of the Code. The horizontal axis plots the algebraic sum of answers to the seven questions about acceptability of specific provisions or standards of the Code. The percentages below the horizontal axis show the weight of each category in the sample.

Table 5.2.4. Attitudes to specific provisions of the Code are correlated.

	Q1	Q2	Q3	Q4	Q5	Q6	Q7
Q1	1						
Q2	0.21**	1					
Q3	0.20**	0.17**	1				
Q4	0.03	0.08*	0.07^{+}	1			
Q5	0.23**	0.10**	0.17**	0.12**	1		
Q6	0.35**	0.12**	0.22**	0.15**	0.28**	1	
Q7	0.24**	0.05	0.22**	0.13**	0.14**	0.35**	1

+ significant at the 10% level; * significant at the 5% level; ** significant at the 1% level

Table 5.2.5. The first principal component explains a third of variation in demand for specific provisions of the Code.

Component	Eigenvalue	Share of explained variation		Eigenvectors		
				1	2	3
1	2.10	0.30	Question1	0.45	0.25	-0.24
2	1.01	0.45	Question 2	0.26	0.67	0.48
3	0.97	0.58	Question 3	0.37	0.22	-0.04
4	0.87	0.71	Question 4	0.21	-0.51	0.78
5	0.81	0.82	Question 5	0.37	-0.03	0.07
6	0.65	0.92	Question 6	0.50	-0.19	-0.17
7	0.59	1.00	Question 7	0.41	-0.38	-0.28

5.3 Determinants of the demand for corporate governance

The first step to introduce the Code is to make sure that companies are ready to disclose whether they comply with the Code's recommendations. The lack of answer to the question about acceptability of the Code as a whole, if the company answered other Code-related questions of the questionnaire, is regarded as unwillingness of the company to disclose information on the compliance of its practices to recommendations of the Code. Therefore we start our analysis with studying the determinants of the readiness to disclose information on compliance with the Code. We introduce the binary variable *Demand* which is defined as in Table 5.3.1.

Table 5.3.1. Half of companies have a positive attitude to the Code.

Independent variable *Demand*	Number of observations	Are you prepared to disclose information about degree of compliance of your corporate governance practices with the recommendations of the Code?	Number of observations
0	474	No answer	295
		No	179
1	413	Yes, we are prepared to do so voluntarily after the Code has been published	289
		Yes, all companies with more than 1,000 shareholders must do so	124
Total	887		887

Table 5.3.2 presents the results of estimations of determinants of the demand for the Code. The demand is determined by awareness and demand for specific provisions and standards. Table 5.3.3 adds all variables describing ownership structure in more detail. The higher the share of outside shareholders, the higher demand for the Code. Moreover, the impact of the share of small shareholders is about double the impact of the stake of the largest outside investor.

We also checked whether the demand depends on the availability of liquid assets and on the interest rate that the company is prepared to pay for a long-term loan. Neither these nor other variables affect demand for the Code significantly. Of all questions related to investment, the presence of a reconstruction plan has the greatest impact on demand for the Code.

Thus, demand for the Code as a whole depends on the attitude to its specific provisions and standards. What does acceptability of specific provisions of the Code depend on? Table 5.3.4 presents factors affecting demand7 – the fist principal component constructed based on the seven questions about acceptability of specific provisions and standards of the Code. Demand for the specific provisions depends primarily on the share of small shareholders and the Corporate Governance Index., i.e. to what extent the standards of the Code are already introduced in the company. Other things equal, the demand for specific provisions of the Code declines with the share of exports in sales.

Another result confirms the presence of externalities in corporate governance at the sectoral level. As we can see from Table 5.3.4., average level of corporate governance in the firm's industry positively affects the firm's demand for corporate governance. Apparently, if other firms in an industry have high level of corporate governance then the firm has to introduce good corporate governance in order to attract investors. This result is not trivial: one could also expect an opposite effect. Indeed, if the level of corporate governance in the industry is low, the firm that is first to improve its corporate governance practices has a first mover advantage. However, such a strategy is also risky, since the costs of disclosure are higher if others remain non-transparent. The positive

effect of other firms' corporate governance practices on a firm's demand for corporate governance is even stronger than the effect of the firm's own current corporate governance.

Table 5.3.2.Demand for the Code is determined by people's awareness of the document itself or its specific provisions and standards, by specific standards of the Code, by existence of small shareholders.

	(1)	(2)	Comments
No_answer7	-0.554**	-0.609**	Companies, which had difficulty answering questions about acceptability of specific standards of the Code, are less prepared to accept the Code as a whole.
Demand7	0.104**		The larger number of provisions of the Code is acceptable to companies, the higher the likelihood that the Code will be acceptable as a whole.
No_answer_Code	-0.146*	-0.146**	Companies unfamiliar with the Code show lower demand for it
Reconstruction plan	0.187**	0.193**	Companies, which have a reconstruction plan, show a greater demand for the Code.
Small	0.137	0.171+	Companies with a larger share of small shareholders show greater demand for the Code
Exports	-0.044	-0.149	Share of exports in company revenues does not affect demand for the Code
Log sales	0.011	0.012	Company size (sales) does not affect demand for the Code
Number of observations	472	472	
Pseudo R^2	0.32	0.29	

+ significant at the 10% level; * significant at the 5% level; **significant at the 1% level. Estimates of marginal effects obtained by the probit regression are presented. The dependent variable is Demand. Sectoral and regional variables were included in the regression but are not shown. Regional variables are insignificant. Sectoral variables are significant: Metallurgy and construction materials companies have greater demand for the Code. Demand 7 is the first principal component constructed in section 5.2

Table 5.3.3 Companies with a larger share of small and large outside shareholders have greater demand for the Code as a whole

	(1)	(2)	(3)	(4)	(5)
No_answer7	-0.554**	-0.530**	-0.512**	-0.611**	-0.556**
Demand7	0.104**	0.115**	0.101**		0.104**
No_answer_Code	-0.146*	-0.177**	-0.163**	-0.146*	-0.150**
Reconstruction plan	0.187**	0.164**	0.157**	0.195**	0.189**
Mgmt		-0.129		-0.083	-0.067
Large outside				0.067	0.068
Small	0.137			0.141	0.105
Exports	-0.044	-0.091	0.014	-0.167	-0.066
Log sales	0.011	0.019	-0.002	0.021	0.022
Number of observations	472	523	519	461	461
Pseudo R^2	0.32	0.32	0.29	0.29	0.32

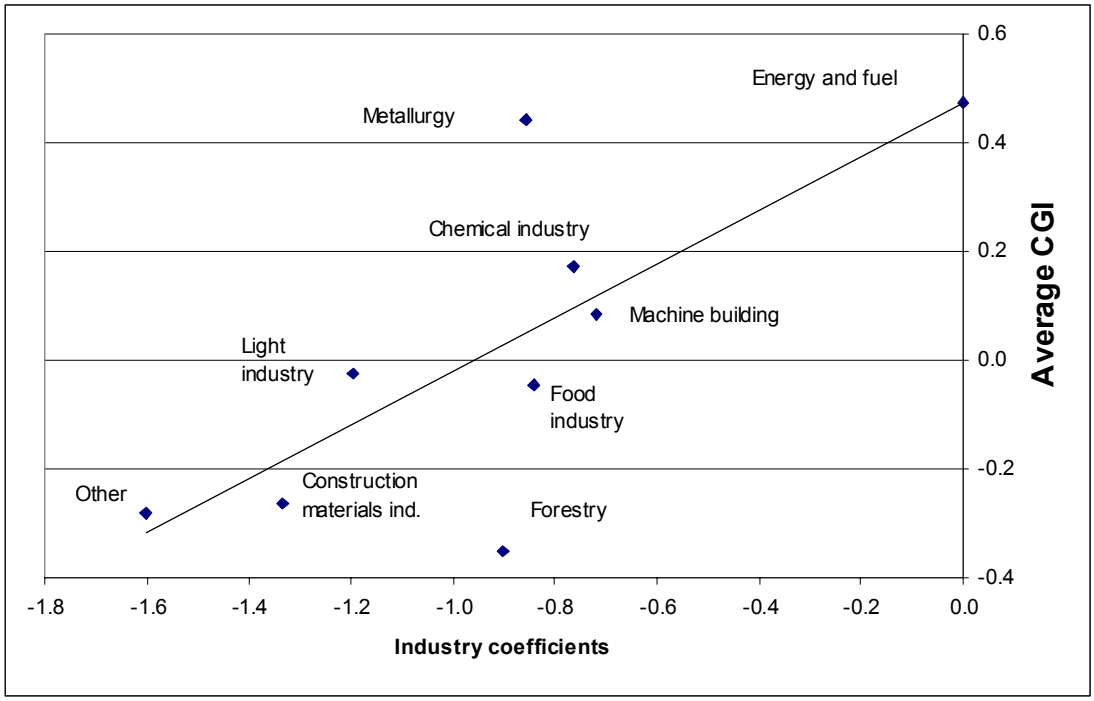
+ significant at the 10% level; * significant at the 5% level; **significant at the 1% level. The table presents estimates of marginal effects obtained by the probit regression. The dependent variable is Demand. Sectoral and regional variables were included in the regression but are not shown. Regional variables are insignificant. Sectoral specifics are significant and similar to those in Table 5.3.2

Table 5.3.4. Demand for the Code's norms increases with the current level of corporate governance in the company and in its industry and with the share of small shareholders.

	(1)	(2)	(3)	(4)	(5)
No_answer_Code	-0.193	-0.243+	-0.242+	-0.246+	-0.214
CGI	0.148*	0.145*	0.148*	0.144*	0.136+
CGI_Industry		0.832*	0.823*	0.835*	0.716+
Reconstruction plan	0.12	0.102		0.107	0.109
Demand for credit			-0.001		
Mgmt					-0.332
Large outside					0.27
Small	0.540*	0.477+	0.454+	0.482+	0.455+
Exports	-0.919+	-0.866+	-0.871+	-0.871+	-0.881+
Log sales	-0.032	-0.01	-0.006	-0.008	-0.012
Liquidity				-0.766	
Number of observations	400	400	400	400	391
Pseudo R^2	0.11	0.09	0.09	0.09	0.09

+ significant at the 10%level; * significant at the 5% level; ** significant at the 1% level. The table presents estimates from OLS regressions for Demand7 (the principal component of answers to the seven questions about acceptability of specific standards f the Code). Regional variables were included in the regressions but are not shown as they are insignificant. Sectoral dummies are included only in specification (1). Variable CGI_Industry is constructed on all firms in an industry excluding the given firm.

Fig. 5.3.5. The demand for corporate governance by industry. Average level of corporate governance in industry explains 54 per cent of variation in the sectoral dummies in the OLS regression for the demand for corporate governance (Table 5.3.4).



The figure displays the relationship between average industry level of corporate governance and coefficients of sectoral dummies from regression (1) in Table 5.3.4. $R^2 = 0.54$.

6 Conclusions

Ten years after the beginning of privatization and corporatization, poor corporate governance still remains a serious problem in Russia.[24] Ways of addressing this problem are far from obvious. The lack of an honest and competent judicial system renders formal implementation of institutions of corporate governance impossible, hence one has to rely on informal adoption of mechanisms of investor rights protection. In this context, it is only appropriate to agree with the Federal Commission, which, after developing the Code of Corporate Conduct, chose not to impose it on a compulsory basis but only recommended companies to adopt it.

To assure voluntary adoption of informal institutions, management and controlling shareholders should have appropriate incentives. In Russia, this turns out possible only if they consolidate a sufficiently large stake. Our study shows that an increase in the ownership concentration has a positive impact on corporate governance. On the other hand, this effect proves to be nonlinear. Once management or a large outside owner consolidate too large a block of shares, a further increase of their stake lowers the quality of corporate governance. The mechanisms of corporate governance studied in this paper (and provided by the Code) protect the rights of small outside shareholders only when the managers or a large outside owner do not have a majority of votes. Hence, mechanisms are needed, which would make it possible to reduce transaction costs of "closing" public companies (converting public companies into closely held ones) in firms where ownership is 'too concentrated'. This requires certain institutional changes, in particular, the development of the independent appraiser industry.

How do ownership structure and corporate governance affect investment? Concentration of ownership increases the likelihood of investment: the higher the share of managers or large outside owners, the more they are interested in investment. The effect of corporate governance is not significant; however, the level of corporate governance and the stake controlled by small outside shareholders prove to be complementary in terms of their impact on investment. In other words, corporate governance positively affects investment in companies, where the share of small shareholders is fairly high. Since there are very few such companies in our sample (as there are in Russian industry as a whole), the effect of corporate governance is, on average, not significant.

The size of the company also plays an important role. Costs of introducing modern standards of corporate governance are relatively small for larger companies. It is not surprising then that the level of corporate governance is, other things being equal, higher in large companies. The same is true of investment.

The mechanisms of corporate governance that the Code offers can have been introduced by the companies voluntarily even prior to the introduction of the Code. Our study shows that demand for the Code and its individual provisions and standards does depend positively on the current level of corporate governance in the company. Companies, which have already implemented specific rules and standards of the Code, find them more acceptable. We have also found the spillovers at the industry level: the more firms in the industry have implemented the norms of Code, the more likely other firms in the industry are interested in adopting the Code.

The attitude to the Code also depends on managers' awareness of its contents. This means that the Code mostly plays the educational role, and efforts to disseminate information about it should be encouraged. Presently, most Russian companies know next to nothing about the Code: only a third of respondents answered that they were aware of the Code and only 4% said that they knew its contents in detail.

[24] Our survey shows that the average level of implementation of six norms of corporate governance (see Section 3.1) is 42%, with all six norms being implemented by only 1.3% of companies.

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8. Appendix

8.1 Distribution of answers to the questions of the questionnaire

Questionnaire 1. Corporate governance - status quo

	As a percentage of those who answered this questionnaire *		
	yes	no	total
Do you use INTERNATIONAL ACCOUNTING STANDARDS (US GAAP/IAS)?	9	84	93
Do you have A SHAREHOLDERS DEPARTMENT?	58	40	97
Do you supply AGENDA of general shareholders meeting to all of your shareholders ?	20	76	97
Are there INDEPENDENT DIRECTORS on the board of directors of your company?	63	31	94
Are there REPRESENTATIVES OF MINORITY SHAREHOLDERS on the board of directors?	74	15	90
Is your shareholders' register maintained by an INDEPENDENT REGISTRAR?	34	60	95
*A total of 1033 companies answered this questionnaire			

Questionnaire 2. Investment and ownership

What were your investment finance sources in the past (2001) year?	As a percentage of respondents who answered this question*
there was no investment	24
own funds	67
bank loans	21
new share issue	1
other	6
*A total of 962 companies answered this question	

	As a percentage of those who answered this questionnaire*		
	yes	no	total
Do you have a reconstruction and development plan requiring considerable investment?	67	31	98
Do you have a large tax debt or overdue accounts payable?	48	50	97
* A total of 992 companies answered the questions of this questionnaire			

	As a percentage of those who answered his questionnaire *			
	more than enough	sufficient	insufficient	total
How do you appraise investment in the past (2001) given EXPECTED DEMAND?	1	19	66	86
*a total of 992 companies answered the questions of this questionnaire				

At what HIGHEST interest rate are you prepared to take a LONG-TERM FOREIGN CURRENCY-DENOMINATED bank loan?	As a percentage of respondents who answered this question *
not required	31
5-10%	62
11-20%	7
More than 20%	1
*A total of 836 companies answered this question	

What actual percentage of shares do you think is owned by:	As a percentage of those who answered this questionnaire *					
	0	1-24	25 - 49	50-74	75-100	total
the management	28	38	10	8	3	87
the largest outside investor	38	20	13	13	4	88
all small shareholders (each of whom owns no more than 5%)	31	23	15	6	5	80
*A total of 681 companies answered the questions of this questionnaire						

Questionnaire 3. The Corporate Conduct Code

	As a percentage of those who answered this questionnaire*
Are you familiar with the Corporate Conduct Code drafted by the Federal Securities Commission?	**90**
yes, in detail	4
yes, in general	29
no	57
Does your company have any restrictions on share acquisition, ownership or voting for minority and foreign shareholders?	**75**
yes	22
no	53
Do you think there is a need for such a code imposing standards of corporate governance based on best practices?	**86**
yes	44
no	4
hard to appraise	38

Do you think adoption of corporate governance standards will help to attract investment in Russian industry?	**86**
certainly so	5
most probably yes	22
hard to appraise	41
most probably not	15
certainly not	3
Are you prepared to disclose information about degree of conformity of your corporate governance practices to recommendations of the Code?	**i**
no	20
yes, we are prepared to do that voluntarily after the Code has been published	33
yes, all companies with more than 1,000 employees must do that	14
*A total 886 companies answered the questions of this questionnaire	

Which corporate governance problems do you think are currently the most sensitive in Russian industry?	As a percentage of respondents who answered this question*
weak protection of small shareholders	38
insufficient control over managers' operation	27
failure by companies to meet information disclosure requirements	13
inadequate competence of the members of the board of directors	24
inadequate protection of creditor rights	18
inadequacy of current legislation (laws on companies, on bankruptcies, etc.)	51
weakness of the judicial system in settling corporate disputes	29
other corporate governance problems	4
main problems of Russian industry go beyond corporate governance	40
*A total of 612 companies answered this question	

How do you appraise acceptability of adoption of the key rules and standards of the Code for your company (also, if you take into account the required "cash" costs) :	As a percentage of those who answered this questionnaire*			
	acceptable	unacceptable	hard to appraise	Total
Allowing all shareholders full, equal and timely access to information about the company (specifically, in the course of a shareholders meeting.)	49	8	28	85
Disclosure of information to general public (in a prospectus, quarterly and annual reports)	28	23	33	84
Control over insider information, no use of confidential information about the company for personal benefit.	24	7	52	84
Election of independent directors to the board of directors.	27	22	35	84
Safeguarding of small shareholder rights in the course of major deals, reorganizations (preemptive right, approval by general shareholder meeting)	28	17	39	84
Engagement of an independent appraiser in conducting major deals, reorganizations; independent audits.	48	7	29	84
Imposition of clear rules for dividend distribution	49	5	30	84
*A total of 886 companies answered the questions of this questionnaire				

Questionnaire 4. Investment.

What PREVENTS your company from attracting (an) OUTSIDE investor(s)?	As a percentage of respondents who answered this question*
1) not required	22
2) there have been no attempts to do that	14
3) lack of information about investors	17
4) Company's lack of experience	11
5) complicated investment procedure	20
6) non-transparence of financial information	7
7) risk that pre-investment stage will bring no results	10
8) demand that too large a stake be sold	13
9) demand that the investor be given access to management	7
10) demand that production structure be changed	4
11) doubts that it is realistic to attract investment	20
12) doubts about reliability of the investor	18
13) indecision of the investor	17
*A total of 590 companies answered this question	

Are you satisfied with CAPITAL EXPENDITURES of your company in 2001?	As a percentage of those who answered this question*
yes	20
no	80
*A total of 854 companies answered this question	

What is the biggest OBSTACLE TO INVESTMENT in the current (2002) year?	As a percentage of those who answered this question*
1) nothing	2
2) lack of own funds	86
3) high interest rates on loans	27
4) difficulty of taking a long-term loan	22
5) low return on investment	9
6) high prices for investment goods and construction/installation	40
7) excess capacity	7
8) other	2
*A total of 881 companies answered this question	

What kind of INVESTMENTS did you make at your company in the past (2001) year?	As a percentage of those who answered this question*
1) none	24
2) to renovate worn out capacities	57
3) to expand capacity with the same efficiency	9
4) to install new capacities of higher efficiency	25
5) to reduce labor costs	8
6) to reduce energy and materials consumption	19
7) to reduce hazardous emissions	9
8) to improve safety standards	11
9) other	4
*A total of 891 companies answered this question	

8.2 The variables

Manager	Managerial stake
Large outside	Largest shareholder's stake
Small	The stake in the hands of all small (up to 5%) shareholders
Logsales	Logarithm of annual sales
Liquidity	Liquid assets at end of year / annual revenues
Exports	Share of exports in revenues
Closely held company	1, if closely held, 0 if public
Profitability	Gross profit/revenues
CGI	Corporate Governance Index, principal component based on six questions about current level of corporate governance at the company
Demand	Demand for the Code as a whole
Demand7	Index of demand for specific provisions of the Code, the principal component based on 7 questions about acceptability of specific provisions of the Code
Demand for credit	Rate of interest (annual, hard currency at which the company is prepared to take a long-term loan). Categories: no need, 5-10%, 10-20%, >20%
Industries	
11	Power and fuel
12	Iron and steel, non-ferrous metals
13	Chemicals and petrochemistry
14	Machinery and metalworking
15	Forestry, woodworking, pulp and paper
16	Construction materials
17	Light industry
18	Food-processing
19	Other

8.3 Tables

Table P1. Structure of Goskomstat's register and IET panel

	INDUSTRIES AND SUB-INDUSTRIES	NUMBER OF COMPANIES		EMPLOYMENT, PERSONS		SHARE OF EMPLOYMENT, %		REPRESENTATION OF PANEL AS REGARDS EMPLOYMENT , %
		REGISTER	PANEL	REGISTER	PANEL	REGISTER	PANEL	
1	**POWER**	841	20	708310	114156	5.26	3.86	16.12
	FUEL							
2	OIL	110	11	308536	18304	2.29	0.62	5.93
3	GAS	32	1	37754	1407	0.28	0.05	3.73
4	COAL, SHALE, PEAT	352	31	456519	106950	3.39	3.62	23.43
5	**IRON AND STEEL**	275	44	718041	226024	5.33	7.64	31.48
6	**NONFERROUS**	417	34	523400	199502	3.89	6.75	38.12
	CHEMICALS/PETROCHEM							
7	CHEMICALS	471	39	620781	117944	4.61	3.99	19.00
8	PETROCHEMISTRY	163	22	224883	51183	1.67	1.73	22.76
	MACHINERY							
9	POWER PLANT MACHINERY	42	10	95013	49570	0.71	1.68	52.17
10	LIFTING-CONVEYING	78	20	64839	29818	0.48	1.01	45.99
11	RAILROAD MACHINERY.	48	13	112939	50353	0.84	1.70	44.58
12	ELECTRICAL MACHINERY	463	40	333890	50268	2.48	1.70	15.06
13	OIL/CHEMICAL MACHINERY	214	34	185713	51652	1.38	1.75	27.81
14	MACHINE TOOLS	301	24	154955	33869	1.15	1.15	21.86
15	INSTRUMENT-MAKING	291	47	350349	111509	2.60	3.77	31.83
16	AUTOMOTIVE	240	30	699055	271567	5.19	9.18	38.85
17	TRACTORS/AGRI. MACHINES	241	28	302009	91314	2.24	3.09	30.24
18	ROAD-BUILDING MACHINES	197	33	99771	35126	0.74	1.19	35.21
19	LIGHT INDUSTRY, FOOD	268	6	119694	2703	0.89	0.09	2.26
20	PLUMBING/HYGIEN EQUIP	102	6	54107	3840	0.40	0.13	7.10
21	AIRCRAFT	89	22	442808	132973	3.29	4.50	30.03
22	ARMAMENTS	131	33	600421	207084	4.46	7.00	34.49
23	SHIPBUILDING	99	15	164217	31005	1.22	1.05	18.88
24	RADIO	126	22	230844	44546	1.71	1.51	19.30
25	COMMUNICATIONS EQUIP	117	21	157190	57645	1.17	1.95	36.67
26	ELECTRONICAL	274	35	268239	84091	1.99	2.84	31.35
27	OTHER MACHINERY	330	29	340439	101842	2.53	3.44	29.91
28	METAL STRUCTURES	669	10	198168	7271	1.47	0.25	3.67
29	MAINTENANCE-REPAIRS	1822	15	431690	7432	3.20	0.25	1.72
	FORESTRY, WOODWORKING, PULP AND PAPER							
30	LOGGING	1463	49	433657	49833	3.22	1.69	11.49
31	SAW MILLING	309	15	93149	18511	0.69	0.63	19.87
32	WOOD COMPONENTS	367	30	124627	31670	0.93	1.07	25.41
33	FURNITURE	639	55	194198	43312	1.44	1.46	22.30
34	OTHER WOODWORKING	111	10	26594	7172	0.20	0.24	26.97
35	PULP AND PAPER	187	20	170941	34866	1.27	1.18	20.40
	CONSTRUCTION MATERIALS							
36	CEMENT/ASBESTOS	73	20	57979	20838	0.43	0.70	35.94
37	PREFABRIICATED CONCRETE	1013	14	276386	5252	2.05	0.18	1.90
38	WALLING	643	20	151951	11058	1.13	0.37	7.28
39	CONSTRUCTION CERAMICS	42	3	23898	2156	0.18	0.07	9.02
40	NON-METALLIC MINERALS	288	8	56247	2729	0.42	0.09	4.85
41	OTHER BUILDING INDUSTRY	349	14	104784	5421	0.78	0.18	5.17
42	GLASS-FAIENCE	167	5	108808	12929	0.81	0.44	11.88
	LIGHT							
43	COTTON FABRICS	190	44	207752	90750	1.54	3.07	43.68
44	WOOL	105	27	87575	35619	0.65	1.20	40.67
45	KNITTED FABRICS	314	28	107945	24391	0.80	0.82	22.60
46	OTHER TEXTILES	404	38	127385	33971	0.95	1.15	26.67
47	GARMENT	1425	65	335226	53375	2.49	1.80	15.92
48	LEATHER/FOOTWEAR	538	23	184676	24270	1.37	0.82	13.14
	FOOD PROCESSING							
49	SUGAR-MAKING	97	16	53930	9523	0.40	0.32	17.66
50	BAKING	1504	19	234636	5339	1.74	0.18	2.28
51	CONFECTIONERY	360	18	89216	14265	0.66	0.48	15.99
52	ALCOHOLIC BEVERAGES	551	41	117306	20729	0.87	0.70	17.67
53	SPICES, SEASONING	670	9	146500	5749	1.09	0.19	3.92
54	MEAT	702	24	186698	16454	1.39	0.56	8.81
55	DAIRY	1492	53	188423	20797	1.40	0.70	11.04
56	FISHERY	391	2	167382	879	1.24	0.03	0.53
57	MICROBIOLOGICAL	40	0	23832	0	0.18	0.00	0.00
58	**MILLING-CEREALS**	494	19	97392	8693	0.72	0.29	8.93
59	**MEDICAL**	152	3	104514	2081	0.78	0.07	1.99
60	**PRINTING**	422	4	77510	1132	0.58	0.04	1.46
61	**OTHER**	484	2	106306	1358	0.79	0.05	1.28
	TOTAL	24789	1428	13471997	2957363	100	100	21.95

Table P2. Capital investment by source of finance, % of capital investment. Source: Goskomstat

	All industries			Manufacturing
Fixed investment - finance sources	1998	1999	2000	1999
Own funds	53.2	52.4	46.1	72.0
Outside sourses	46.8	47.6	53.9	28.0
Of which, budgetary funds	19.1	17.0	21.2	4.7

Table P3. Factors explaining availability of a reconstruction and development plan

	(1)	(2)
CGI	0.056*	0.026
Manager	-0.063	-0.121
Large outside	0.222+	0.287*
Small	-0.260**	-0.255*
Log sales	0.044*	0.066*
ind12	0.138	0.169
ind13	0.067	0.103
ind14	-0.013	0.079
ind15	0.035	0.077
ind16	0.180	0.194
ind17	0.089	0.186
ind18	0.166	0.179
ind19	0.238	
Liquidity		1.591+
Number of observations	323	231
Pseudo R^2	0.09	0.09

+ significant at the 10% level; * significant at the 5% level; ** significant at the 1% level. The dependent variable is 0 if the company did not have a reconstruction and development plan requiring considerable investment, is 1 if there was such a plan

Table P4. Investment and investment finance sources. Multinomial logit. Base category – no investment

	(1)	(2)
	Only inside investment	Outside investment
Log sales	1.023**	0.963**
Liquidity	18.564*	3.031
Reconstruction plan	0.062	0.975+
Manager	1.974*	0.912
Large outside	1.010	1.370
Small	1.691*	0.486
CGI	-0.214	-0.143
Exports	0.361	0.482
ind12	-17.525**	-19.110**
ind13	-18.131**	-19.127**
ind14	-16.538**	-18.312**
ind15	-15.315**	-16.957**
ind16	-16.856**	-18.237**
ind17	-17.654**	-18.418**
ind18	-15.660**	-17.323**
ind19	-16.711	15.650
Moscow	-0.060	-32.350
Far East	-0.774	-0.212
North West	-0.546	-1.371
Siberia	-1.634+	-0.855
South	-0.762	-2.337+
Urals	0.205	1.011
Volga	-0.311	0.640
Constant	4.613	5.672
Number of observations	*208*	*208*
Pseudo R2	*0.23*	

+ significant at the 10% level; *significant at the 5% level; ** significant at the 1% level.

Table P5. Correlation Matrix

	CGI	Mgmt	LOutside	Small	LogSales	Liquid.	Profit
CGI	1.00						
Mgmt	-0.05	1.00					
LOutside	0.23*	-0.27*	1.00				
Small	0.17*	-0.12*	-0.08	1.00			
LogSales	0.41*	-0.12*	0.14*	-0.03	1.00		
Liquidity	-0.11*	0.10*	-0.09	-0.03	-0.03	1.00	
Profit	-0.03	-0.02	-0.03	-0.03	-0.13*	0.02	1.00
Export	-0.06	0.00	0.00	0.01	0.01	0.01	0.00
CloselyHeld	-0.06	0.20*	-0.12*	0.17*	-0.02	-0.01	-0.01
Invest	0.12*	0.05	0.03	-0.01	0.34*	0.09*	-0.02
External	-0.03	-0.03	0.07	-0.09	-0.01	-0.08	0.07
Credit Demand	0.08*	0.01	0.02	0.00	0.07	-0.13*	0.07
RenovPlan	0.10*	-0.03	0.08*	-0.13*	0.20*	0.03	-0.06
Demand	0.18*	-0.06	0.03	0.10*	0.06	-0.02	-0.02
Demand7	0.23*	-0.10*	0.07	0.11*	0.13*	0.01	0.06
NoAnswerC	-0.25*	0.04	-0.01	-0.05	-0.12*	-0.02	-0.06
NoAnswer7	-0.21*	0.04	-0.04	-0.05	-0.07	0.01	-0.08*

	Export	Closely Held	Invest	External	RenovPlan	Demand	Demand7
Export	1.00						
CloselyHeld	0.01	1.00					
Invest	0.05	0.02	1.00				
External	-0.08*	-0.03		1.00			
Credit Demand	-0.07	0.00	0.03	0.11*	1.00		
RenovPlan	0.03	0.01	0.19*	0.08*	0.25*	1.00	
Demand	0.00	-0.03	0.04	0.03	0.08	0.12*	1.00
Demand7	0.00	-0.03	0.03	-0.09*	0.03	0.06	0.45*
NoAnswerC	0.01	0.03	-0.03	0.00	-0.07	-0.04	-0.22*
NoAnswer7	0.07*	0.02	-0.02	-0.08	-0.11*	-0.01	-0.36*

	Demand7	NoAnswerC	NoAnswer7
Demand7	1.00		
NoAnswerC	-0.13*	1.00	
NoAnswer7	-0.46*	0.19*	1.00

* - correlation is significant at 5% level

8.4 Brief description of the Code of Corporate Conduct

The code gives the following definition of corporate conduct:

"Corporate Conduct is the concept covering various activities concerned with governance of businesses. Corporate governance affects performance of businesses and their ability to raise capital required for economic growth. Improvement of corporate conduct in the Russian Federation is a key measure required for increasing investment inflow to all sectors of the Russian economy, from domestic sources and foreign investors alike. Implementation of certain standards based on the analysis of best practices of corporate conduct may become one of the ways of such improvement.

The purpose of application of corporate conduct standards is protection of interests of all shareholders, regardless of the size of shareholdings owned by them. The higher level of protection of shareholder interests can be achieved, the larger investment Russian joint stock companies (hereinafter referred to as companies) can rely on, which will have a positive impact on the Russian economy as a whole.

The Code establishes the following principles of corporate governance:

1. *Corporate conduct practices should effectively enable shareholders to exercise their rights associated with participation in a company.*
2. *Corporate conduct practices should secure equal treatment of shareholders owning equal numbers of shares of the same type (category). Equal protection should be secured for all shareholders if their rights are infringed.*
3. *Corporate conduct practices should secure strategic management of company operations by the board of directors and efficient control by the board of directors over activities of executive bodies of a company, as well as accountability of the members of the board of directors of a company to shareholders thereof.*
4. *Corporate conduct practices should enable executive bodies of a company to exercise efficient management of company operations in a reasonable manner, in good faith and solely in the interests of a company, and should secure accountability of executive bodies of the company to the board of directors of a company and shareholders thereof.*
5. *Corporate conduct practices should secure timely disclosure of full and accurate information about the company, including its financial position, performance, ownership and management structures in order to enable shareholders and investors of a company to take reasonable decisions.*
6. *Corporate conduct practices should take into account statutory rights of parties concerned, including company employees, and encourage active cooperation between the company and the parties for the purpose of increasing the net worth of the company, the value of its shares and other securities, and of creating jobs.*
7. *Corporate conduct practices should secure efficient control over business and financial operations of a company for the purpose of protecting rights and lawful interests of shareholders.*

In addition, the code provides detailed recommendations on the following issues:

A general meeting of shareholders: calling and preparation of a meeting, agenda, procedures for conducting a meeting, voting procedures

A board of directors: its responsibilities, formation, members, independent directors, organization of board of directors' activities, remuneration of directors.

Executive bodies of the company (management board, general director), authority and responsibilities, members, formation, organization of activities, remuneration, answerability.

Major deals, reorganizations: definition, procedures.

Disclosure of information about a company: goals, forms, provision of information to shareholders, auditing, an auditing committee.

Dividends: setting the amount, distribution procedures

Settlement of corporate disputes.